SERV 52001

Service Manual

Car Audio Amplifier

MODEL: A. DB-2 (AB-2)
B. DB-4 (AB-4)
C. DB-21 (AB-21)
D. DB-23 (AB-23)
E. DB-25 (AB-25)
F. DB-43 (AB-43)
G. DB-45 (AB-45)

DAEWOO ELECTRONICS CO.,LTD.

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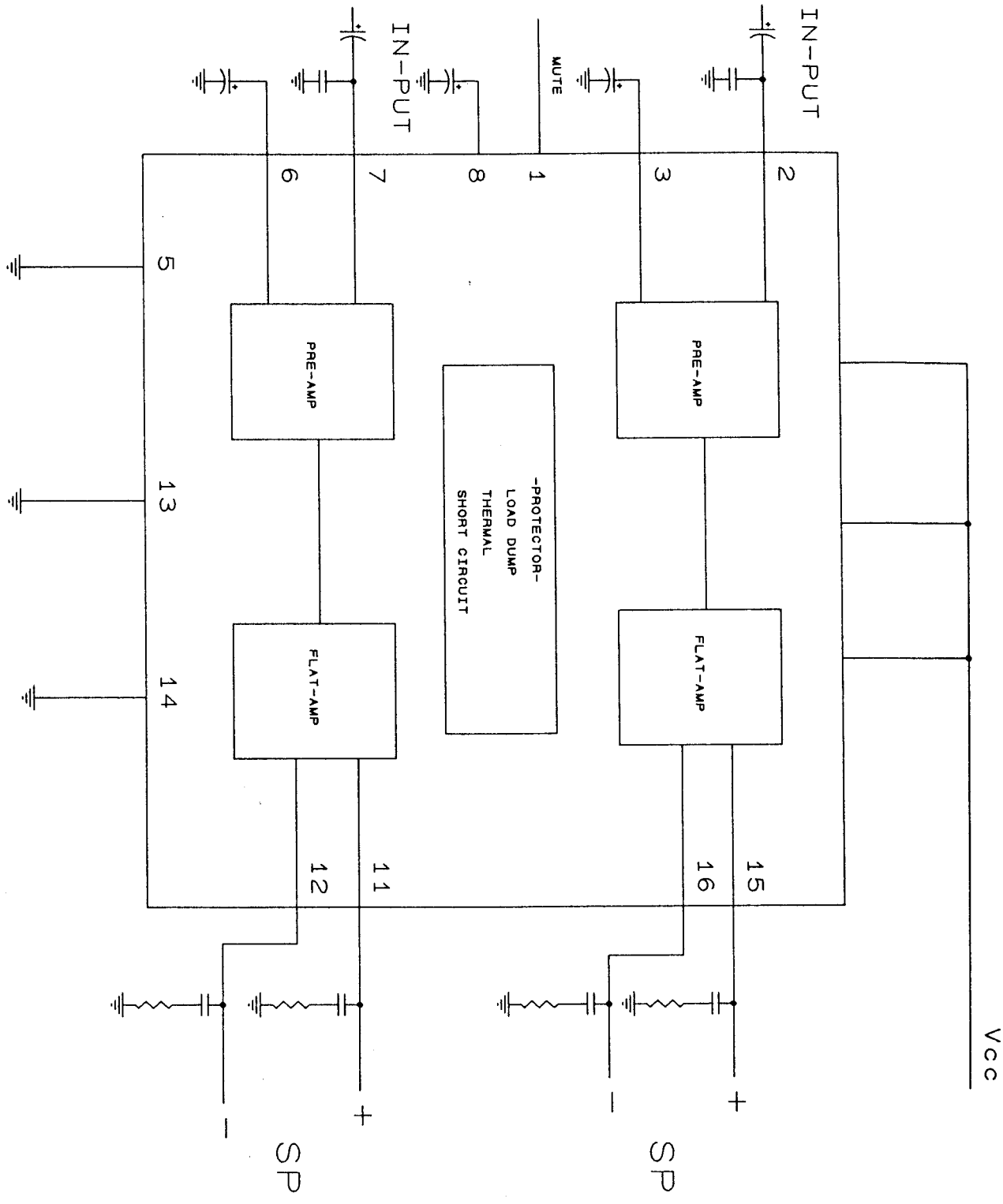
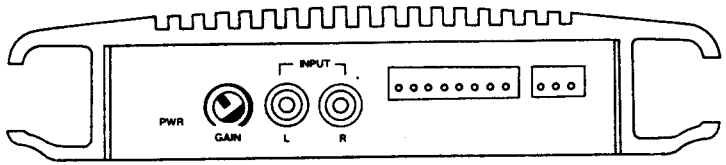
1. SPECIFICATIONS

- Two input channel.
- Adjustable input Sensitivity Control for each channel.
- Remote Power ON/OFF control.
- LED power indicator.
- Built-in Thermal protection circuit.
- High Conversation Heat sink Design.
- RCA type input connectors.(Low input)
- High Level input connectors (High input)
- 2 ohm stable
- AVERAGE POWER OUTPUT/CH INTO 4 OHMS
  - @ 20Hz ~ 20KHz, 0.5% THD ---------- 17W
  - @ 1KHz, 10% THD ---------- 19W
- AVERAGE POWER OUTPUT/CH INTO 2 OHMS
  - @ 20Hz ~ 20KHz, 0.5% THD ---------- 26W
  - @ MAX OUTPUT ---------- 40W
- FREQUENCY RESPONSE (±1dB) --------- 10Hz~30KHz
- SIGNAL TO NOISE RATIO (1 HF A) ---------- 90dB
- INPUT SENSITIVITY / into 10k ohms load impedence
  - HIGH ---------- 100mV
  - LOW ---------- 1V
- OPERATING VOLTAGE ---------- DC 14.4V
  (10.8V-15.6V allowable range)
- SPEAKER IMPEDANCE ---------- 2 Ohms or 4 Ohms
- FUSE ---------- 7A
- DIMENSION W ---------- 180mm
  H ---------- 38mm
  D ---------- 100mm
- NET WEIGHT ---------- 0.7kg


IN-PUT
MUTE
IN-PUT
PRE-AMP
PRE-AMP
-PROTECTOR-
LOAD DUMP
THERMAL
SHORT CIRCUIT
FLAT-AMP
FLAT-AMP
1
2
3
5
6
7
8
11
12
13
14
15
16
Vcc
SP
SP

DB 2 — 40W(MAX) x 2 CHANNEL POWER AMPLIFIER

DAEWOO



FRONT VIEW

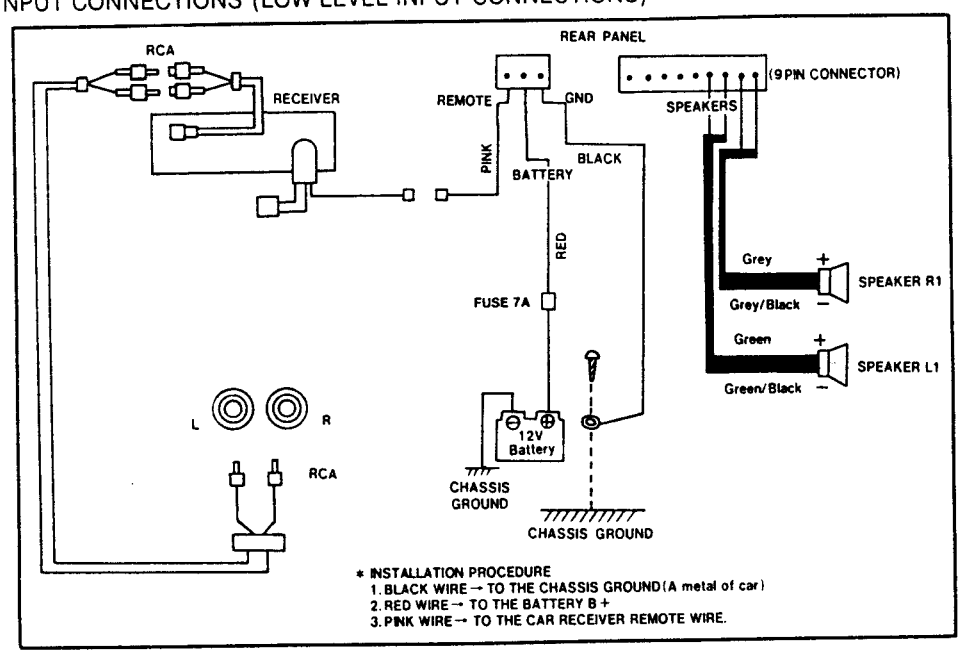
FEATURES

- Stereo 2 Channel.
- Adjustable Input Sensitivity Control.
- Remote Power ON/OFF control.
- LED power indicator.
- Built-in Thermal Protection Circuit.
- High Convection Heat Sink Design.
- RCA Type input connectors. (Low Input)
- High Level Input connectors (High Input)
- 2 ohm stable

1. WIRE CONNECTIONS

CAUTION: Before connecting any wire, turn off the ignition key and the power switch of your main cassette receiver.

* SPEAKER CONNECTIONS
* POWER SUPPLY CONNECTIONS
* INPUT CONNECTIONS (LOW LEVEL INPUT CONNECTIONS)



1. Speaker connections
   - SPEAKER R : Connect the Grey wire to the speaker's plus(+) lead and the Grey/Black wire to the speaker's minus(−) lead.
   - SPEAKER L : Connect the Green wire to the speaker's plus(+) lead and the Green/Black wire to the speaker's minus(−) lead.

   CAUTION : Do not commonly ground the negative wires of the speakers, because the amplifier output has a floating ground.

2. Power supply connections:
   - Secure the BLACK WIRE (Ground) to the chassis by using a screw already attached to the chassis of the car. If a screw is not available near your amplifier, drill 3.6mm diameter hole on the chassis of the car and secure the ground lead
   - Connect the RED WIRE (Battery +) directly to the positive lead of the battery. Do not connect it to the ignition key controlled positive lead.
   - Connect the PINK WIRE (Remote ON/OFF) to the remote power control lead (or power antenna control lead) of your main cassette receiver. In this case, the power of the unit will be automatically controlled by the power switch of your main cassette receiver.

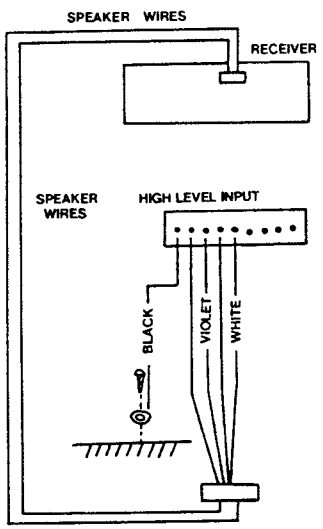
3. 1: Low Level Input connections:

   Low level input (RCA INPUT) : Connect the 2 RCA input jacks located on the front panel of this unit to the preamp output jacks of your main cassette receiver or crossover with the shield RCA cables.

MODEL: DB-2AB-2

1 WIRE CONNECTIONS –CONTINUED–

3 INPUT CONNECTIONS
3.2: HIGH LEVEL CONNECTIONS



– INPUT R : Connect the White wire to the speaker's input(+) lead and the White/Black wire to the speaker's input(–) lead.
– INPUT L : Connect the Violet wire to the speaker's input(+) lead and the Violet/Black wire to the speaker's input(–) lead
– GROUND : Connect the BLACK wire to Metal parts of chassis to have ground connection. (This connection is necessary only when you connect high input.)

* CAUTION : DON'T USE THIS HIGH LEVEL CONNECTION, WHEN YOU HAVE LOW LEVEL INPUT CONNECTED WITH RCA CABLES.

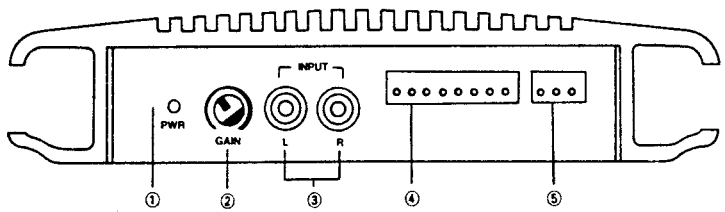
WE RECOMMEND TO HAVE LOW LEVEL INPUT ONLY,
WHEN RCA LOW LEVEL OUTPUT IS AVAILABLE FROM YOUR SET.

2 SPECIFICATIONS

□ AMPLIFIER SECTION
- AVERAGE POWER OUTPUT/CH INTO 4 OHMS
  - @ 20Hz-20KHz, 0.5% THD 17W
  - @ 1KHz, 10% THD 19W
- AVERAGE POWER OUTPUT/CH INTO 2 OHMS
  - @ 20Hz-20KHz, 0.5% THD 26W
  - @ MAX OUTPUT 40W
- FREQUENCY RESPONSE(–3dB) ..... 10Hz~30KHz
- SIGNAL TO NOISE RATIO (IHF-A) 85dB
- INPUT SENSITIVITY/into 10k ohms load impedance
  - HIGH 100mV
  - LOW 1V

□ GENERAL
- OPERATING VOLTAGE ..... DC 14.4V (10.8V-15.6V allowable range)
- SPEAKER IMPEDANCE ..... 2 Ohms or 4 Ohms
- FUSES ..... 7 AMPS
- DIMENSION W 180mm
  - H 38mm
  - D 100mm
- NET WEIGHT 0.7Kg

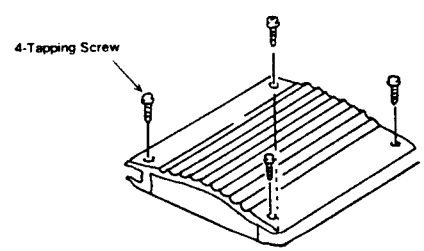
3 CONTROLS



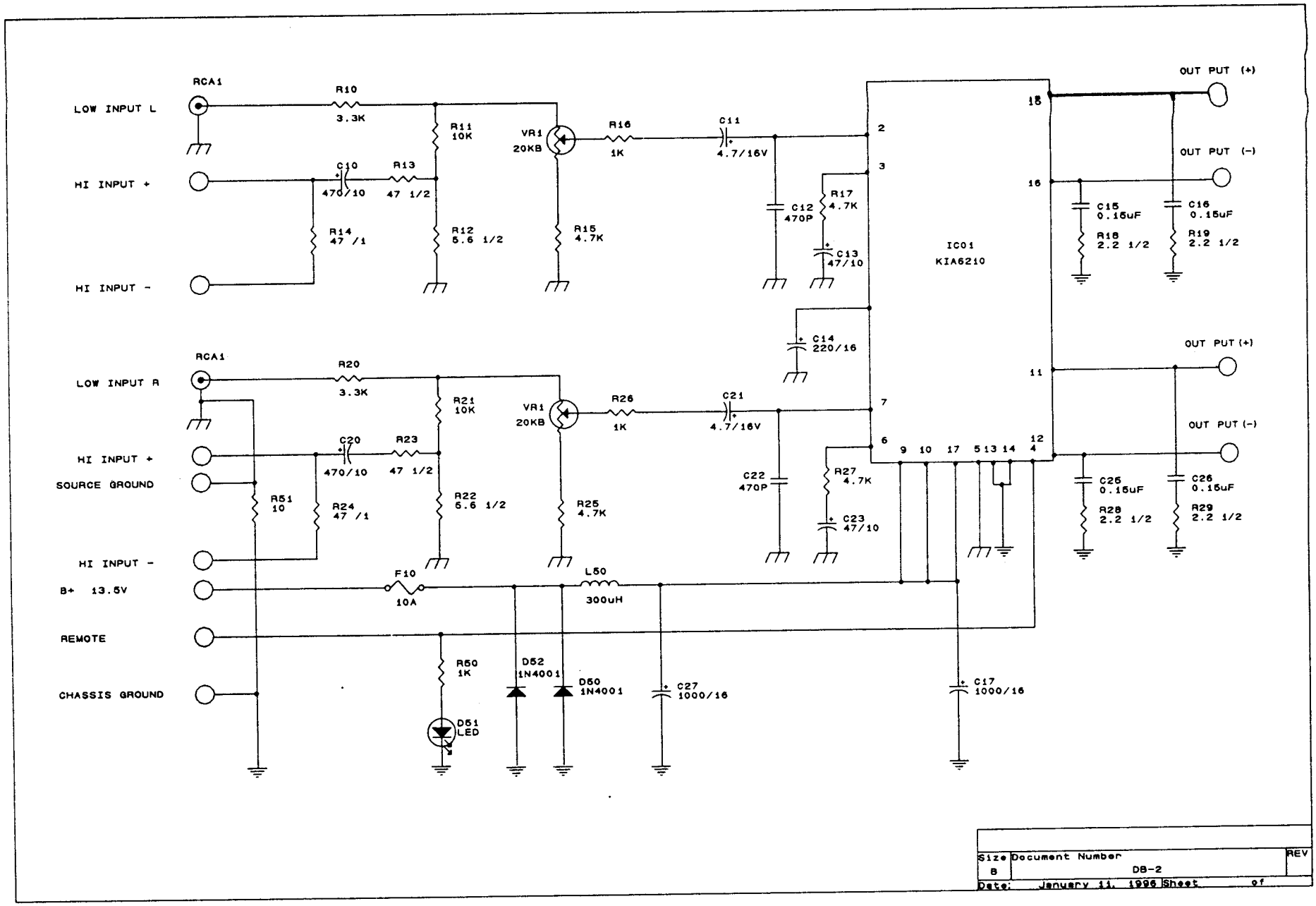
① **Power indicator**– Lights up en the unit is in operation.
② **Input Level Control**– Adjust the input level control to obtain the desired gain.
③ **RCA input jack**– Connect the preamplifier jacks of your receiver, equalizer or CDP to this low-input jack. See WIRE CONNECTIONS in the gront page for details.
④ **Speaker & High Input Connector**
⑤ **Remote, Battery (B) & Ground Connector**
* For ④ & ⑤, see the Connections.

4 INSTALLATION

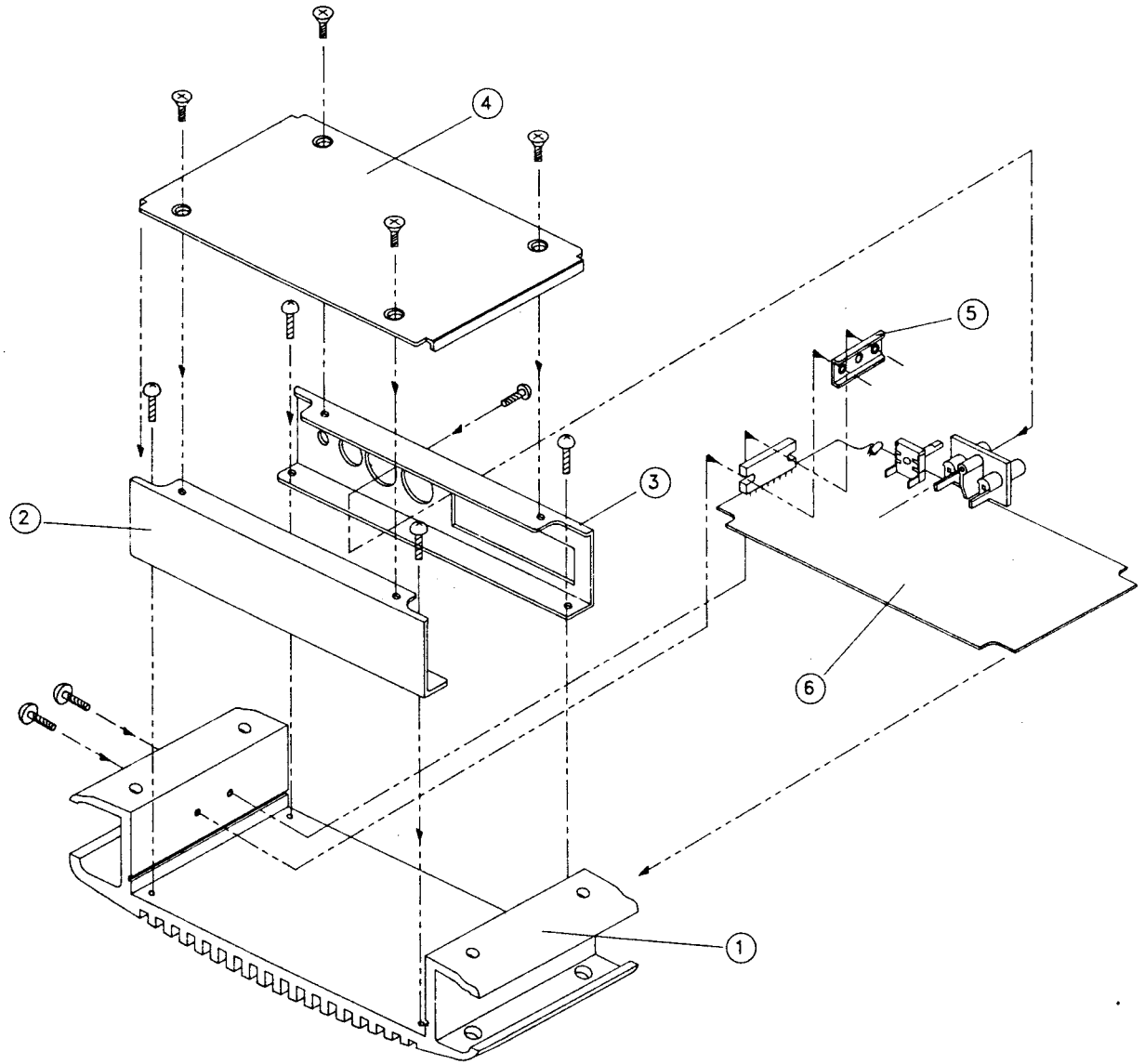
■ **Installation procedure**
1. Open four holes (ϕ 3.5mm) to mount the unit.
2. Use the four tapping screws (4X25) to secure the unit.



NOTE : Specifications & design subject to change without notice for improvements.


LOW INPUT L
HI INPUT +
HI INPUT -
RCA1
R10
3.3K
R11
10K
VR1
20KB
R16
1K
C11
4.7/16V
C10
470/10
R13
47 1/2
R14
47 /1
R12
5.6 1/2
R15
4.7K
C12
470P
R17
4.7K
C13
47/10
C14
220/16
IC01
KIA6210
OUT PUT (+)
OUT PUT (-)
C15
0.15uF
R18
2.2 1/2
C16
0.15uF
R19
2.2 1/2
LOW INPUT R
HI INPUT +
SOURCE GROUND
HI INPUT -
RCA1
R20
3.3K
R21
10K
VR1
20KB
R26
1K
C21
4.7/16V
C20
470/10
R23
47 1/2
R51
10
R24
47 /1
R22
5.6 1/2
R25
4.7K
C22
470P
R27
4.7K
C23
47/10
C25
0.15uF
R28
2.2 1/2
C26
0.15uF
R29
2.2 1/2
B+ 13.5V
REMOTE
CHASSIS GROUND
F10
10A
L50
300uH
R50
1K
D51
LED
D52
1N4001
D50
1N4001
C27
1000/16
C17
1000/16
Size
B
Document Number
DB-2
REV
Date: January 11, 1996 Sheet of

MODEL: DB-2AB-2



NO.	DESCRIPTION	MATERIAL	Q'TY	REMARKS
6	MAIN PCB ASS'Y		1	
5	IC BRAKET		1	
4	TOP COVER		1	
3	BACK COVER		1	
2	FRONT COVER		1	
1	BODY		1	

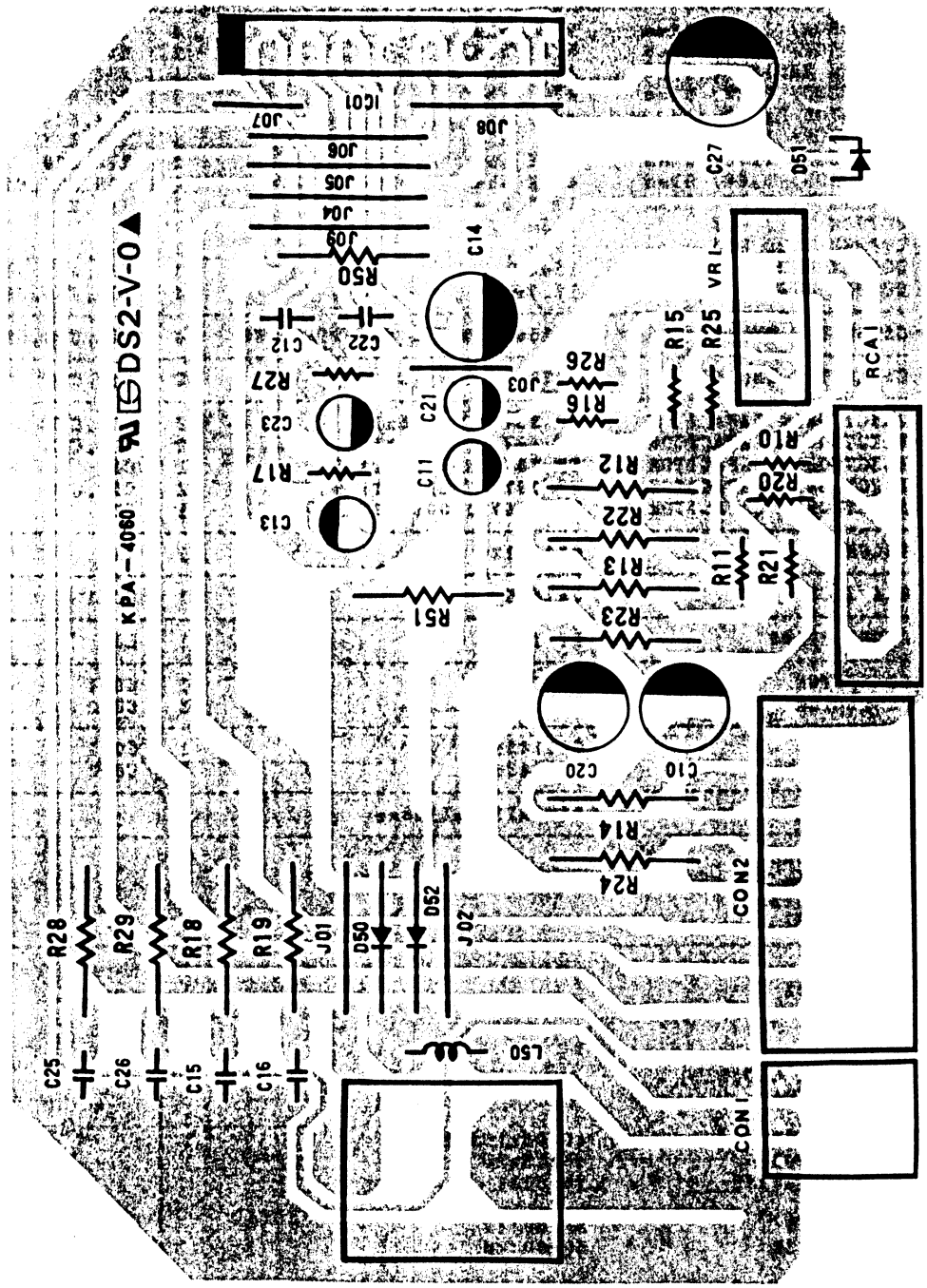
DRAWN	DESIGNED	CHECKED	APPROVED	NAME

MODEL | DISK NO. | CAD FILE | SHEET | DRAW NO.

PART LIST

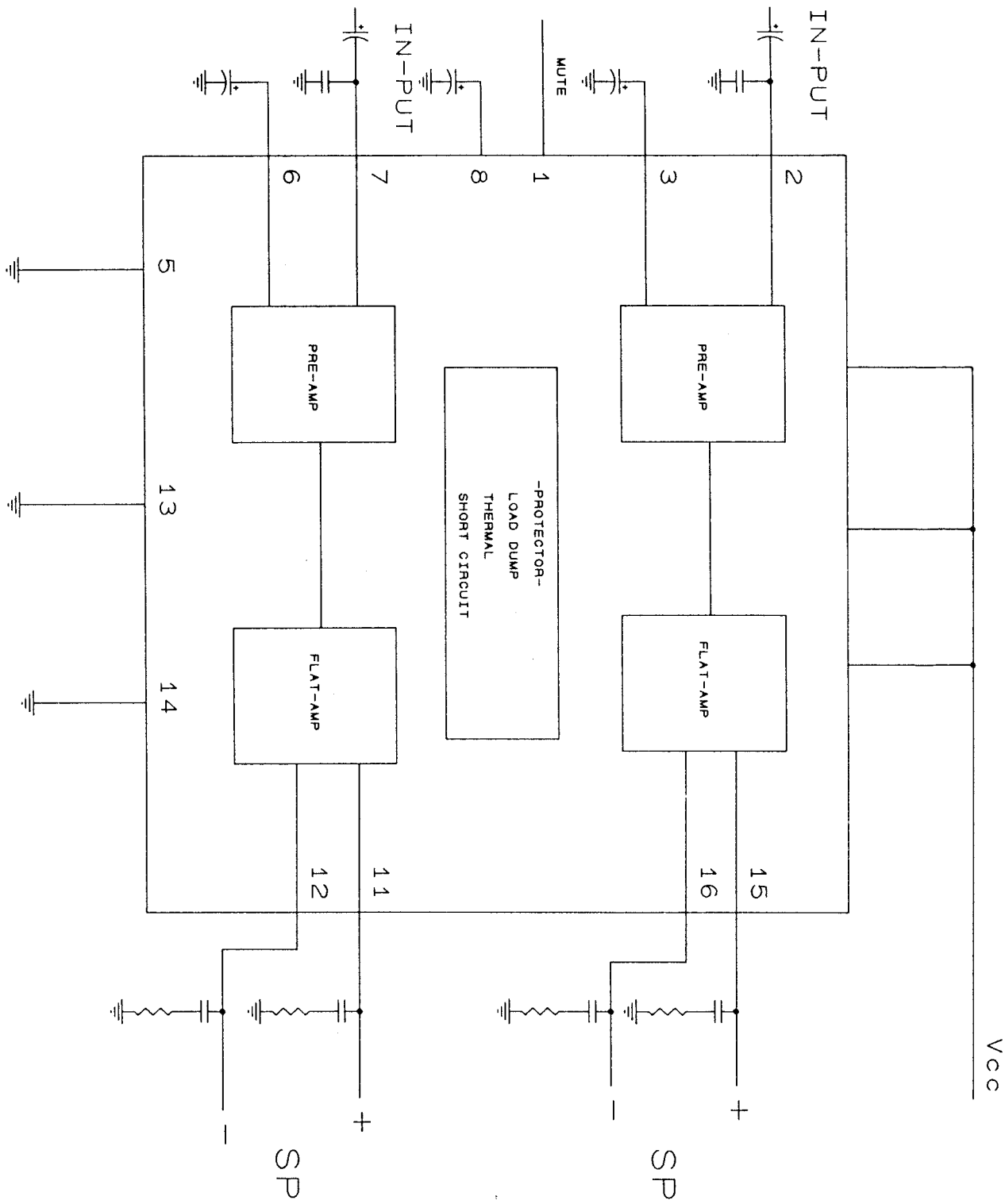
MODEL:DB-2
NAME :CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATION	UNIT	DRAWING NO
1	Printed Circuit Board	92mmx130mmx1.6t	1	
2	I.C	KIA6210AH/KIA6220H	1	IC01
3	DIODE	1N4001	2	D50,D52
4	LED	KLR 113	1	D51
5	R.CARBON/ 1/2W/ 52mm	2.2 ohm	4	R18,R19,R28,R29
6	R.CARBON/ 1/2W/ 52mm	5.6 ohm	2	R12,R22
7	R.FUSE RESISTOR 1/2W	10 ohm	1	R51
8	R.CARBON/ 1/2W/ 52mm	47 ohm	2	R13,R23
9	RESISTOR.OXIDE /1W	47 ohm	2	R14,R24
10	R.CARBON/ 1/6W/ 52mm	1K ohm	3	R16,R26,R50
11	R.CARBON/ 1/6W/ 52mm	3.3K ohm	2	R10,R20
12	R.CARBON/ 1/6W/ 52mm	4.7K ohm	4	R15,R25,R17,R27
13	R.CARBON/ 1/6W/ 52mm	10 K ohm	2	R11,R21
14	COPPER WIRE 0.6	7.5mm	1	J07
15	COPPER WIRE 0.6	10mm	1	J03
16	COPPER WIRE 0.6	15mm	3	J01,J02,J08
17	COPPER WIRE 0.6	17.5mm	4	J04,J05,J06,J09
18	CAPACITOR MYLAR	0.15uF 50WV J AUTO TAPPING	4	C15,C16,C25,C26
19	CAPACITOR CERAMIC	470P 50VW J	2	C12,C22
20	ELECTRONIC CAPACITOR	TP 35V 4.7uF 5x11	2	C11,C21
21	ELECTRONIC CAPACITOR	TP 10V 47uF 5x11	2	C13,C23
22	ELECTRONIC CAPACITOR	TP 16V 220uF 8x11.5	1	C14
23	ELECTRONIC CAPACITOR	TP 10V 470uF 8x11.5	2	C10,C20
24	ELECTRONIC CAPACITOR	KME 16V 1000uF 10X20	1	C27
25	VOLUME	RK14K121	1	VR1
26	RCA JACK	JW1606	1	RCA1
27	CHOKE TRANS	EI-19	1	L50
28	CONNECTOR	LA1143-3	1	CON1
29	CONNECTOR	LA1143-9	1	CON2
30	C. WIRE	CH1143-3	1	CON1
31	C. WIRE	CH1143-9	1	CON2
32	HEAT SINK	180mmX39mmX100mm	1	
33	FRONT PANAL		1	
34	REAR PANAL		1	
35	BOTTOM COVER		1	
36	IC BRACKET		1	
37	GIFT BOX		1	
38	CARTON BOX		0.1	
39	SNOW BOX		2	
40	REFLECTOR LED(RED)		1	
41	INST. MANUAL		1	
42	STICKER		1	
43	POLY BAG(SET)	t0.08x155x250	1	
44	CUSHION PAD	t5x15x20	1	
45	SILICON GREASE	YG 6111		
46	BOND			
47	SOLDER BAR	SN 60:40		
48	SOLDER WIRE	SN 60:40		
49	FLUX			
50	POLY BAG(ACCESARY SCREW)	t0.08x80x100		
51	POLY BAG(WIRE ASS'Y)	t0.08x100x230		
52	TAPPING SCREW	T3x4 BTT2	4	
53	TAPPING SCREW	T3x8 BTT2(BLACK)	1	
54	TAPPING SCREW	T4x25 BTT2(PAN)	4	
55	MACHINE SCREW	M3x4 FLAT(BLACK)	4	
56	TAPPING SCREW	T3x14 BIND(BLACK)	2	
57	LED EYE(RED)		1	

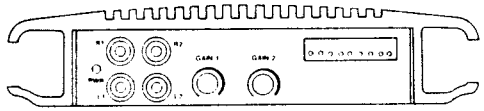

DS2-V-0
KPA-4060
IC01
J07
J08
J06
J05
J04
J09
R50
C14
C12
C22
R27
R26
R16
R15
R25
VR1
RCA1
C23
J03
C21
C11
R17
R12
R10
R20
C13
R22
R13
R11
R21
R51
R23
C20
C10
R14
R24
CON2
R28
R29
R18
R19
J01
D50
D52
J02
D51
C27
C25
C26
C15
C16
L50
CON1

1. SPECIFICATIONS

- Four input channel.
- Adjustable input Sensitivity Control for each channel.
- Remoto Power ON/OFF control.
- LED power indicator.
- Built-in Thermal protection circuit.
- High Conversation Heat sink Design.
- RCA type input connectors (Low input)
- High Level input connectors (High input)
- 2 ohm stable
- AVERAGE POWER OUTPUT/CH INTO 4 OHMS
  @ 20Hz ~ 20KHz, 0.5% THD ---------- 17W
  @ 1KHz, 10% THD ---------- 19W
- AVERAGE POWER OUTPUT/CH INTO 2 OHMS
  @ 20Hz ~ 20KHz, 0.5% THD ---------- 26W
  @ MAX OUTPUT ---------- 40W
- FREQUENCY RESPONSE (±1dB) --------- 10Hz~30KHz
- SIGNAL TO NOISE RATIO (1 HF A) ---------- 90dB
- INPUT SENSITIVITY / into 10k ohms load impedence
  HIGH ---------- 100mV
  LOW ---------- 1V
- OPERATING VOLTAGE ---------- DC 14.4V
  (10.8V-15.6V allowable range)
- SPEAKER IMPEDANCE ---------- 2 Ohms or 4 Ohms
- FUSE ---------- 10A
- DIMENSION W ---------- 180mm
  H ---------- 38mm
  D ---------- 130mm
- NET WEIGHT ---------- 0.9kg


IN-PUT
MUTE
IN-PUT
2
1
3
8
7
6
5
13
14
12
11
16
15
PRE-AMP
PRE-AMP
-PROTECTOR-
LOAD DUMP
THERMAL
SHORT CIRCUIT
FLAT-AMP
FLAT-AMP
Vcc
SP
SP
+
-
+
-

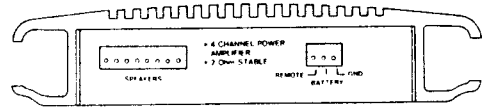
DB-4 40W(MAX) X 4 CHANNEL POWER AMPLIFIER



FRONT VIEW

FEATURES

- Four input channel
- Adjustable Input Sensitivity Control for each channel.
- Remote Power ON/OFF control.
- LED power indicator
- Built-in Thermal Protection Circuit
- High Convection Heat Sink Design
- RCA Type input connectors (Low Input)
- High Level Input connectors (High Input)
- 2 ohm stable

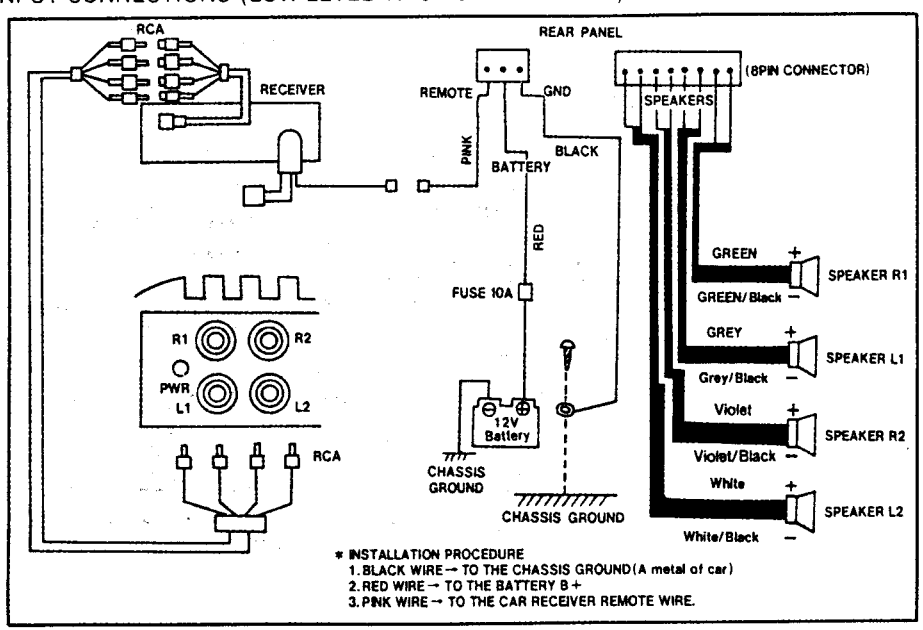


REAR VIEW

1. WIRE CONNECTIONS

CAUTION: Before connecting any wire, turn off the ignition key and the power switch of your main cassette receiver.

* SPEAKER CONNECTIONS
* POWER SUPPLY CONNECTIONS
* INPUT CONNECTIONS (LOW LEVEL INPUT CONNECTIONS)



1. Speaker connections (8 WIRE CONNECTIONS)
   - SPEAKER R1: Connect the Green wire to the speaker's plus(+) lead and the Green/Black wire to the speaker's minus(−) lead.
   - SPEAKER L1: Connect the Grey wire to the speaker's plus(+) lead and the Grey/Black wire to the speaker's minus(−) lead.
   - SPEAKER R2: Connect the Violet wire to the speaker's plus(+) lead and the Violet/Black wire to the speaker's minus(−) lead
   - SPEAKER L2: Connect the White wire to the speaker's plus(+) lead and the White/Black wire to the speaker's minus(−) lead.

   CAUTION: Do not commonly ground the negative wires of the speakers, because the amplifier output has a floating ground.

2. Power supply connections:
   - Secure the BLACK WIRE (Ground) to the chassis by using a screw already attached to the chassis of the car. If a screw is not available near your amplifier, drill 3.6mm diameter hole on the chassis of the car and secure the ground lead
   - Connect the RED WIRE (Battery +) directly to the positive lead of the battery. Do not connect it to the ignition key controlled positive lead.
   - Connect the PINK WIRE (Remote ON/OFF) to the remote power control lead (or power antenna control lead) of your main cassette receiver. In this case the power of the unit will be automatically controlled by the power switch of your main cassette receiver.

3. 1: Low Level Input connections:

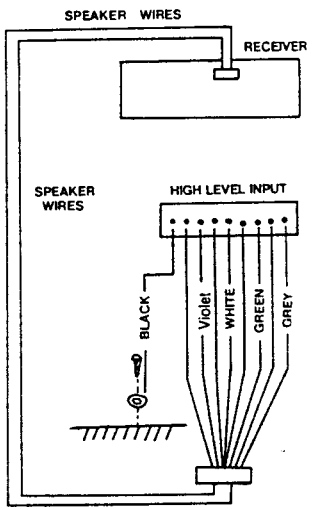
   Low level input (RCA INPUT): Connect the 4 RCA input jacks located on the front panel of this unit to the preamp output jacks of your main cassette receiver or crossover with the shield RCA cables.

CE

MODEL: DB-4AB-4

1 WIRE CONNECTIONS –CONTINUED–

3 INPUT CONNECTIONS
3.2 : HIGH LEVEL CONNECTIONS



–INPUT L1: Connect the Grey wire to the speaker's input(+) lead and the Grey/Black wire to the speaker's input(–) lead.
–INPUT R1: Connect the Green wire to the speaker's input(+) lead and the Green/Black wire to the speaker's input(–) lead.
–INPUT L2: Connect the White wire to the speaker's input(+) lead and the White/Black wire to the speaker's input(–) lead.
–INPUT R2: Connect the Violet wire to the speaker's input (+) lead and the Violet/Black wire to the speaker's input(–) lead.
–GROUND : Connect the BLACK wire to Metal parts of chassis to have ground connection. (This connection is necessary only when you connect high input.)

* CAUTION : DON'T USE THIS HIGH LEVEL CONNECTION, WHEN YOU HAVE LOW LEVEL INPUT CONNECTED WITH RCA CABLES.

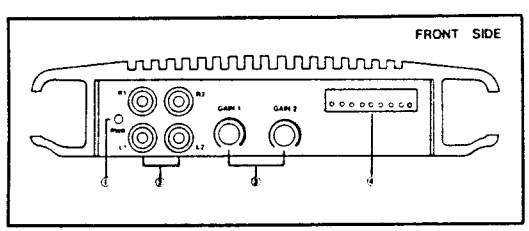
WE RECOMMEND TO HAVE LOW LEVEL INPUT ONLY, WHEN RCA LOW LEVEL OUTPUT IS AVAILABLE FROM YOUR SET.

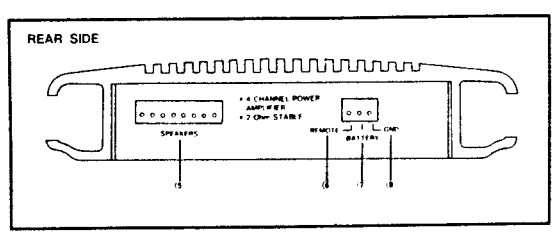
2 SPECIFICATIONS

[ ] AMPLIFIER SECTION
- AVERAGE POWER OUTPUT / CH INTO 4 OHMS
  - @ 20Hz-20KHz, 0.5% THD 17W
  - @ 1KHz, 10% THD 19W
- AVERAGE POWER OUTPUT / CH INTO 2 OHMS
  - @ 20Hz-20KHz, 0.5% THD 26W
  - @ MAX OUTPUT 40W
- FREQUENCY RESPONSE (–3dB) ..... 10Hz ~ 30KHz
- SIGNAL TO NOISE RATIO (1HF A) 85dB
- INPUT SENSITIVITY / into 10k ohms load impedance
  - HIGH 100mV
  - LOW 1V

[ ] GENERAL
- OPERATING VOLTAGE ..... DC 14.4V (10.8V-15.6V allowable range)
- SPEAKER IMPEDANCE ..... 2 Ohms or 4 Ohms
- FUSES ..... 10 AMPS
- DIMENSION W 180mm
  - H 38mm
  - D 130mm
- NET WEIGHT ..... 0.8 Kg

3 CONTROLS

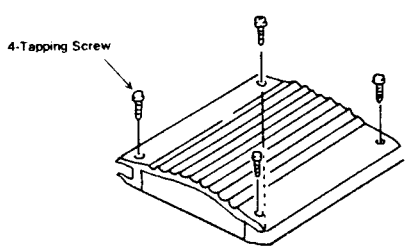




① **Power indicator** – Lights up when the unit is in operation.
② **RCA input jack** – Connect the preamplifier jacks of your receiver, equalizer or CDP to this low-input jack. See WIRE CONNECTIONS in the front page for details.
③ **Input Level Control** – Adjust the input level control to obtain the desired gain.
④ **High input jack** – Connect the speaker outputs of your receiver to this jack. *(THIS IS NECESSARY ONLY WHEN YOU DON'T HAVE RCA)*
⑤ **Speaker connections** – See the speaker connection section for details.
⑥ **Remote Control Connection** (Pink) – Connect it to the remote control of car receiver.
⑦ **Power supply connection** (Red) – Connect it to the battery B +(12V).
⑧ **Chassis Ground Connection** (Black) – Connect it to the metal part of your car chassis.

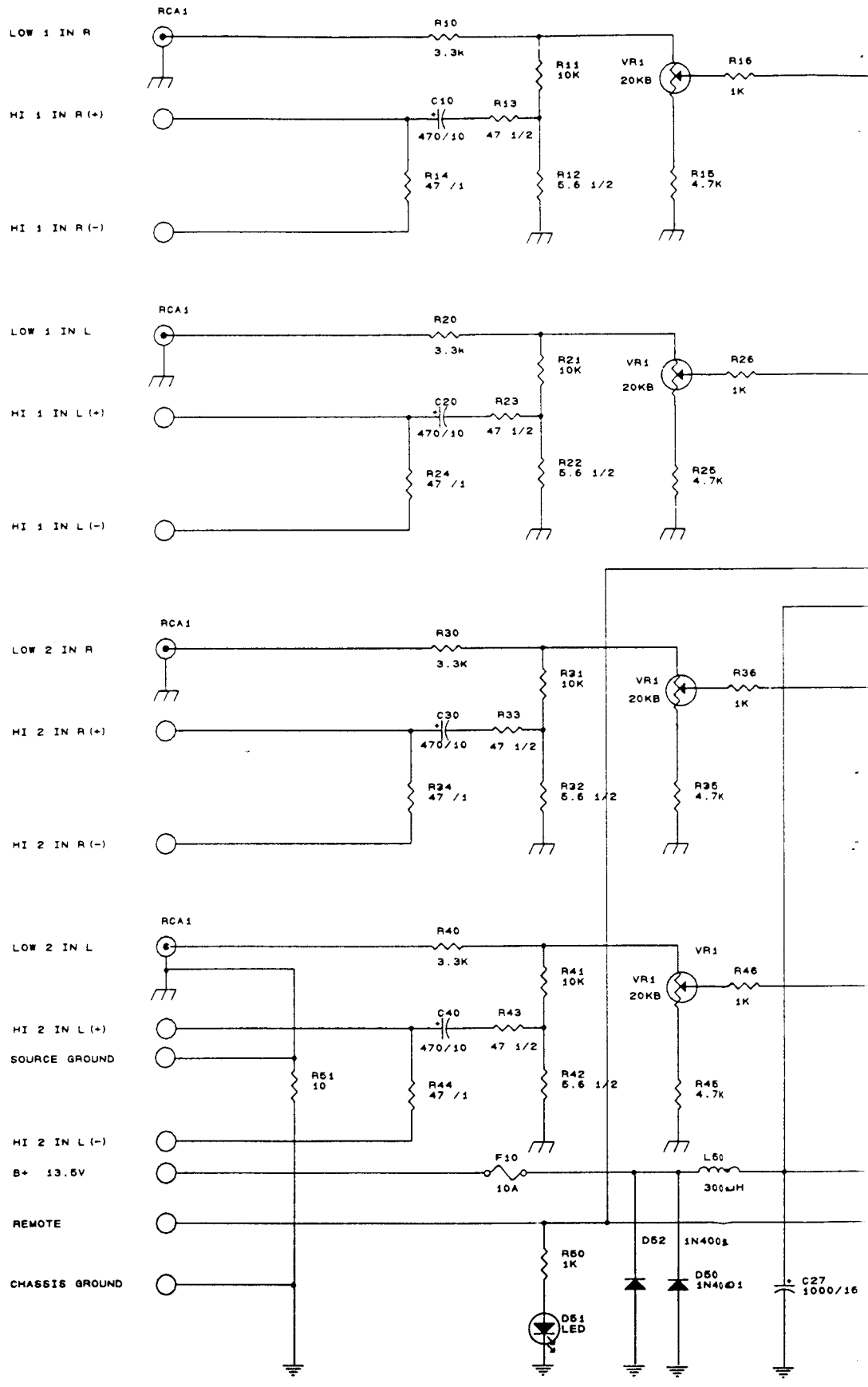
4 INSTALLATION

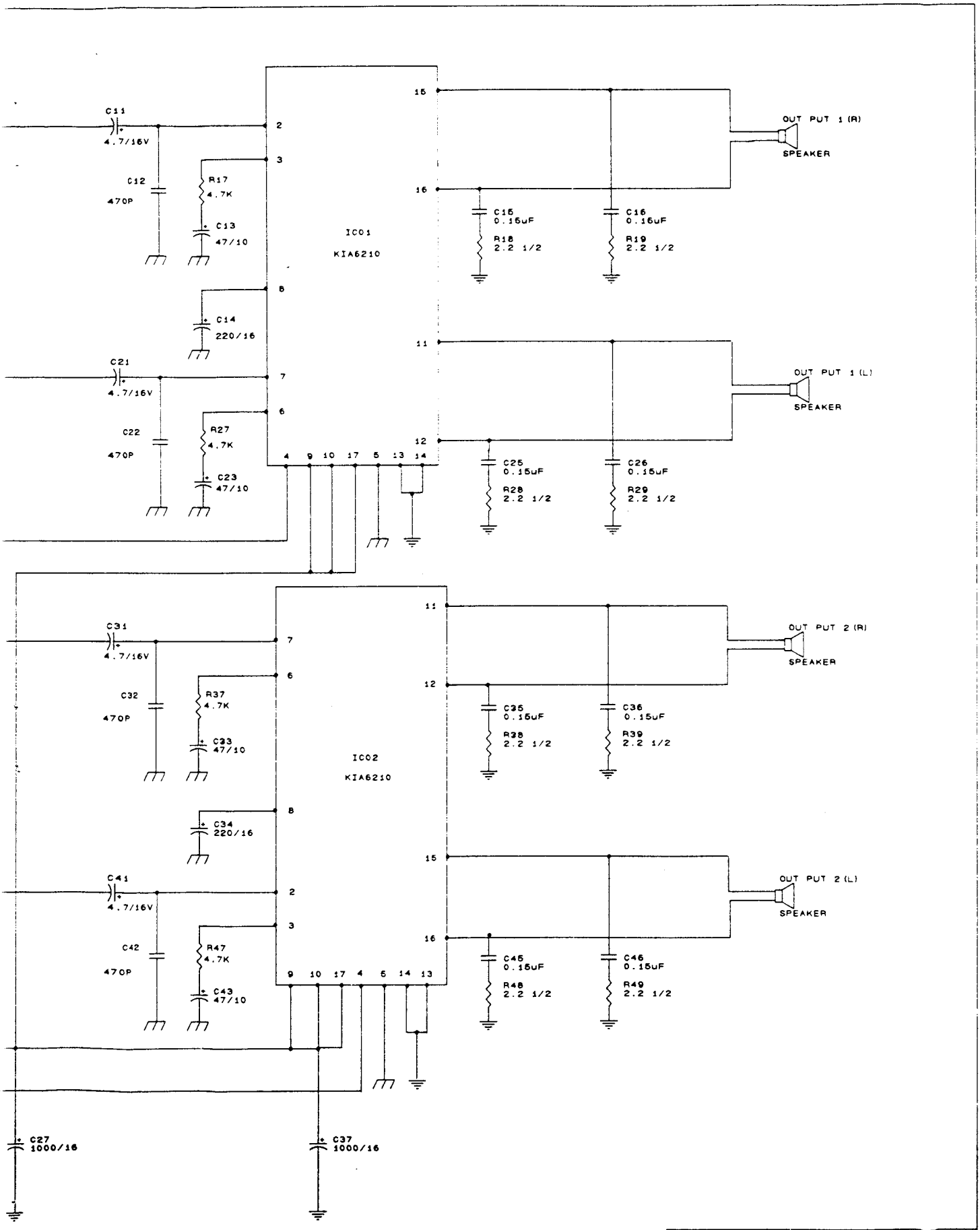
■ **Installation procedure**
1. Open four holes (ϕ 3.5mm) to mount the unit.
2. Use the four tapping screws (4X25) to secure the unit.



NOTE : Specifications & design subject to change without notice for improvements.

MODEL: DB-4AB-4





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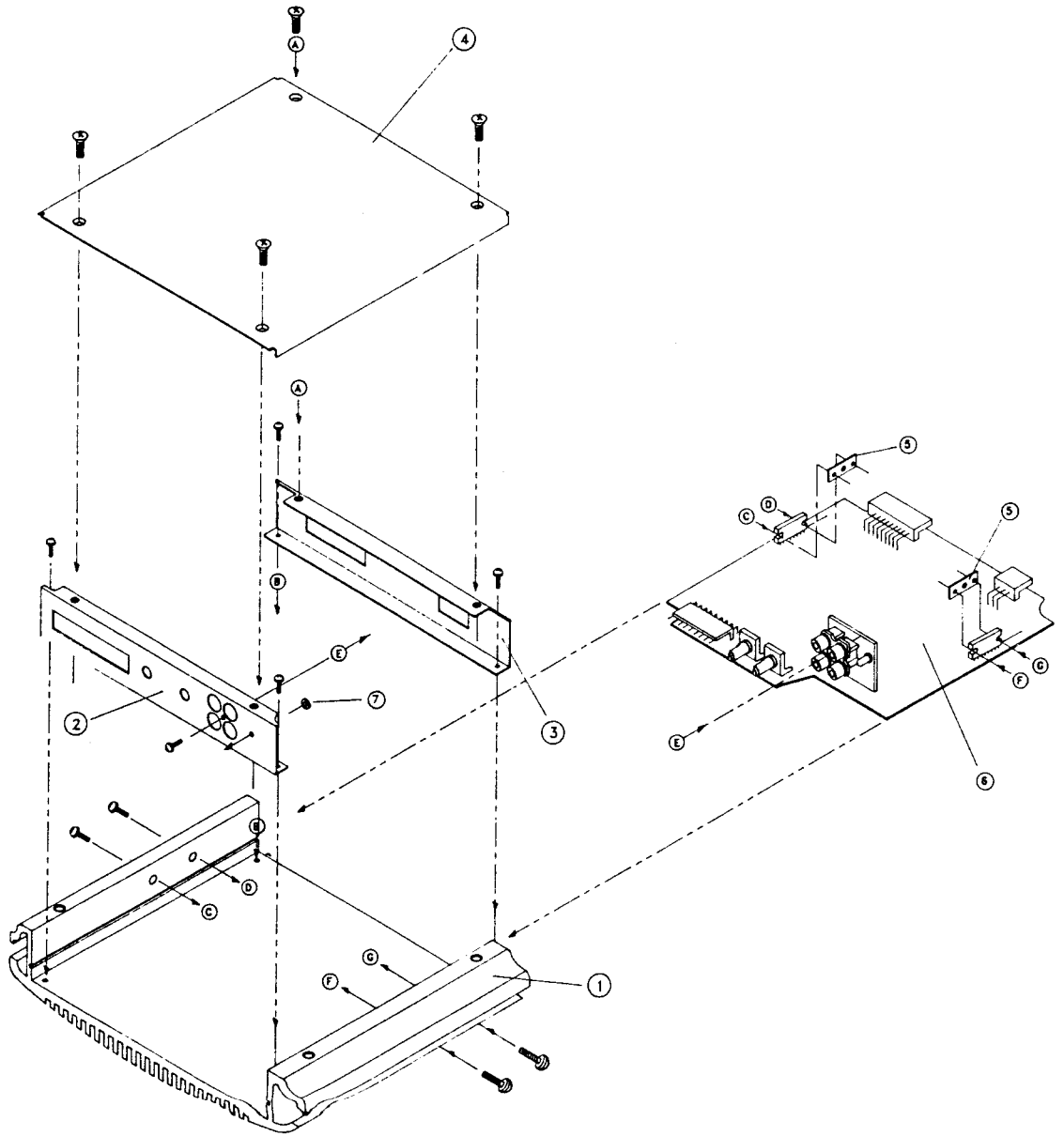
Date: January 9, 1996	Sheet	



NO.	DESCRIPTION	MATERIAL	Q'TY	REMARKS
6	MAIN PCB ASS'Y		1	
5	IC BRAKET		2	
4	TOP COVER		1	
3	BACK COVER		1	
2	FRONT COVER		1	
1	BODY		1	

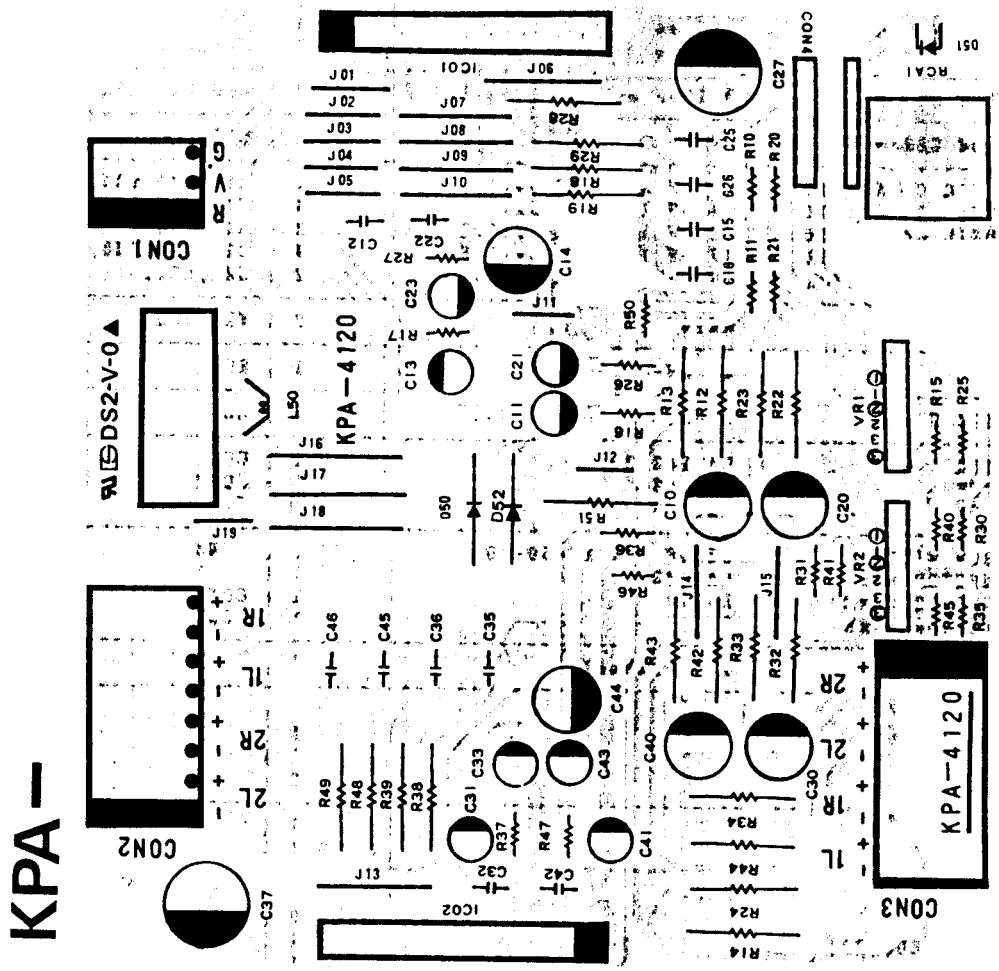
DRAWN	PERFORMED	CHECKED	APPROVED	NAME
				MODEL

DISK NO. | CAD FILE | SHEET | DRAW NO.

PART LIST

MODEL : DB-4
NAME : CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATION	UNIT	DROWING NO
1	Printed Circuit Board	121mmx130mmx1.6T	1	
2	I.C.	KIA6210AH/KIA6220H	2	IC01,IC02
3	DIODE	1N4001	2	D50,D52
4	LED(RED)	KLR 113L	1	D51
5	R.CARBON/ 1/2W/ 52mm	2.2 ohm	8	R18,R19,R28,R29,R38,R39,R48,R49
6	R.CARBON/ 1/2W/ 52mm	5.6 ohm	4	R12,R22,R32,R42
7	R.FUSE RESISTOR 1/2W	10 ohm	1	R51
8	R.CARBON/ 1/2W/ 52mm	47 ohm	4	R13,R23,R33,R43
9	RESISTOR.OXIDE /1W	47 ohm	4	R14,R24,R34,R44
10	R.CARBON/ 1/6W/ 52mm	1 K ohm	5	R16,R26,R36,R46,R50
11	R.CARBON/ 1/6W/ 52mm	3.3K ohm	4	R10,R20,R30,R40
12	R.CARBON/ 1/6W/ 52mm	4.7K ohm	8	R15,R25,R35,R45,R17,R27,R37,R47
13	R.CARBON/ 1/6W/ 52mm	10 K ohm	4	R11,R21,R31,R41
14	COPPER WIRE 0.6	7.5 mm	3	J11,J12,J19
15	COPPER WIRE 0.6	10 mm	5	J01,J02,J03,J04,J05
16	COPPER WIRE 0.6	12.5mm	2	J14,J15
17	COPPER WIRE 0.6	15 mm	6	J06,J07,J08,J09,J10,J13
18	COPPER WIRE 0.6	17.5mm	3	J16,J17,J18
19	CAPACITOR MYLAR	0.15uF 50WV J AUTO TAPPING	8	C15,C16,C25,C26,C35,C36,C45,C46
20	CAPACITOR CERAMIC	470P 50VW J	4	C12,C22,C32,C42
21	ELECTRONIC CAPACITOR	4.7uF 35V SME 5x11	4	C11,C21,C31,C41
22	ELECTRONIC CAPACITOR	47uF 10V SME 5x11	4	C13,C23,C33,C43
23	ELECTRONIC CAPACITOR	220uF 16V SME 8x11.5	2	C14,C44
24	ELECTRONIC CAPACITOR	470uF 10V SME 8x11.5	4	C10,C20,C30,C40
25	ELECTRONIC CAPACITOR	1000uF16V SME 10X20	2	C27,C37,
26	VOLUME	RK14K121	2	VR1,VR2
27	RCA JACK	4P JW-4303	1	RCA1
28	CHOKE TRANS	EI-24	1	L50
29	CONNECTOR	LA1143-3	1	CON1
30	CONNECTOR	LA1143-8	1	CON2
31	CONNECTOR	LA1143-9	1	
32	7P RIBBON WIRE	28AWG BLK 10-50-10	1	CON4
33	3P CONNECTOR WIRE	LA1143-3	1	CON1
34	8P CONNECTOR WIRE	LA1143-8	1	CON2
35	9P CONNECTOR WIRE	CH1143-9	1	CON1
36	HEAT SINK	180mmX39mmX130mm	1	
37	FRONT PANAL		1	
38	REAR PANAL		1	
39	BOTTOM COVER		1	
40	IC BRACKET		2	
41	GIFT BOX		1	
42	CARTON BOX		0.1	
43	SNOW BOX		2	
44	REFLECTOR LED(RED)		1	
45	INST. MANUAL		1	
46	STICKER		1	
47	POLY BAG(SET)	t0.08x180x250	1	
48	CUSHION PAD	t5x15x20		
49	SILICON GREASE	YG 6111		
50	BOND			
51	SOLDER BAR	SN 60:40	18	
52	SOLDER WIRE	SN 60:40	3	
53	FLUX			
54	POLY BAG(ACCESARY SCREW)	t0.08x80x100		
55	POLY BAG(WIRE ASS'Y)	t0.08x100x230		
56	TAPPING SCREW	T3x4 BTT2	4	
57	TAPPING SCREW	T3x8 BTT2, BLACK	1	
58	TAPPING SCREW	T4x25 (PAN)	4	
59	MACHINE SCREW	M3x4(FLAT), BLACK	4	
60	TAPPING SCREW	T3x14(BIND), BLACK	4	
61	LED EYE(RED)		2	

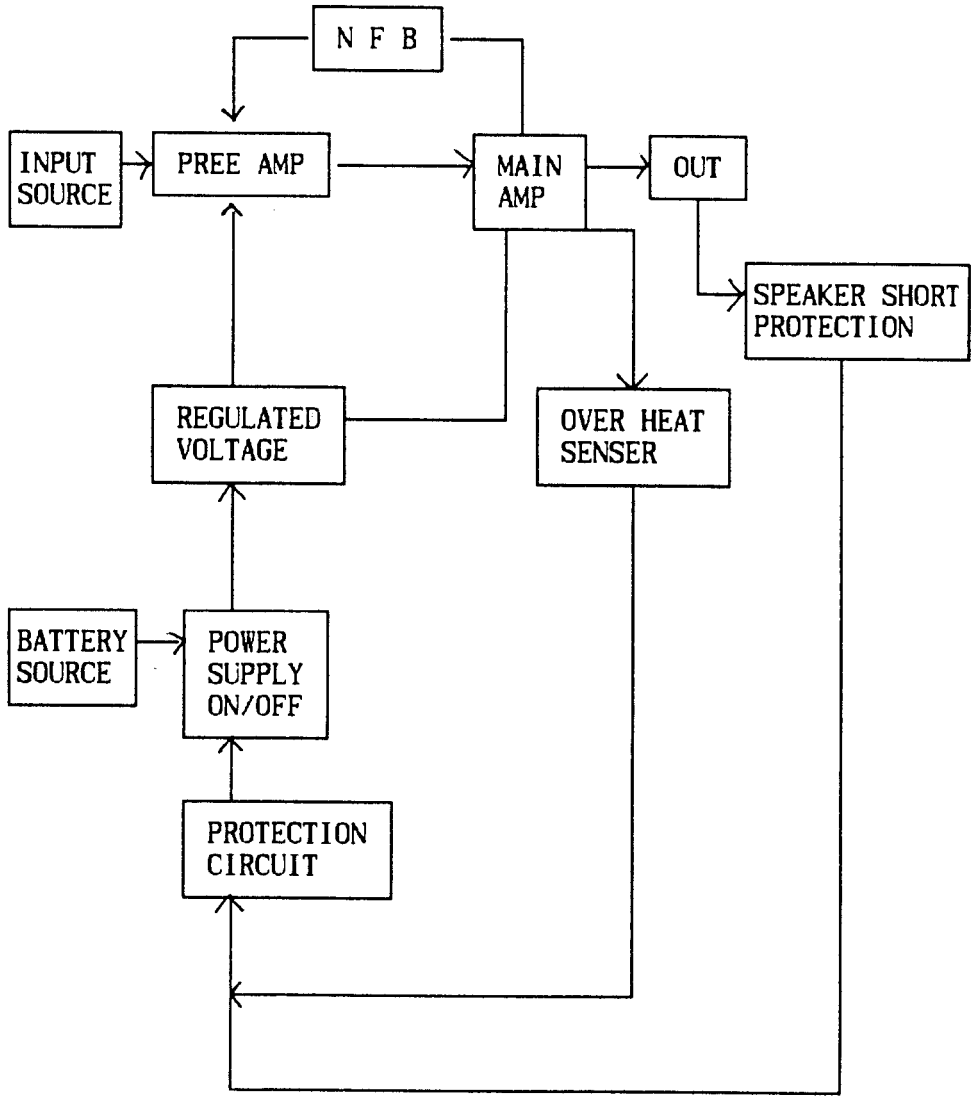

KPA-
KPA-4120
CON1
CON2
CON3
CON4
DS2-V-0
RCA1
VR1
VR2
D51
D52
IC01
IC02
L50
J01
J02
J03
J04
J05
J06
J07
J08
J09
J10
J11
J12
J13
J14
J15
J16
J17
J18
J19
R
V
G
1R
1L
2R
2L

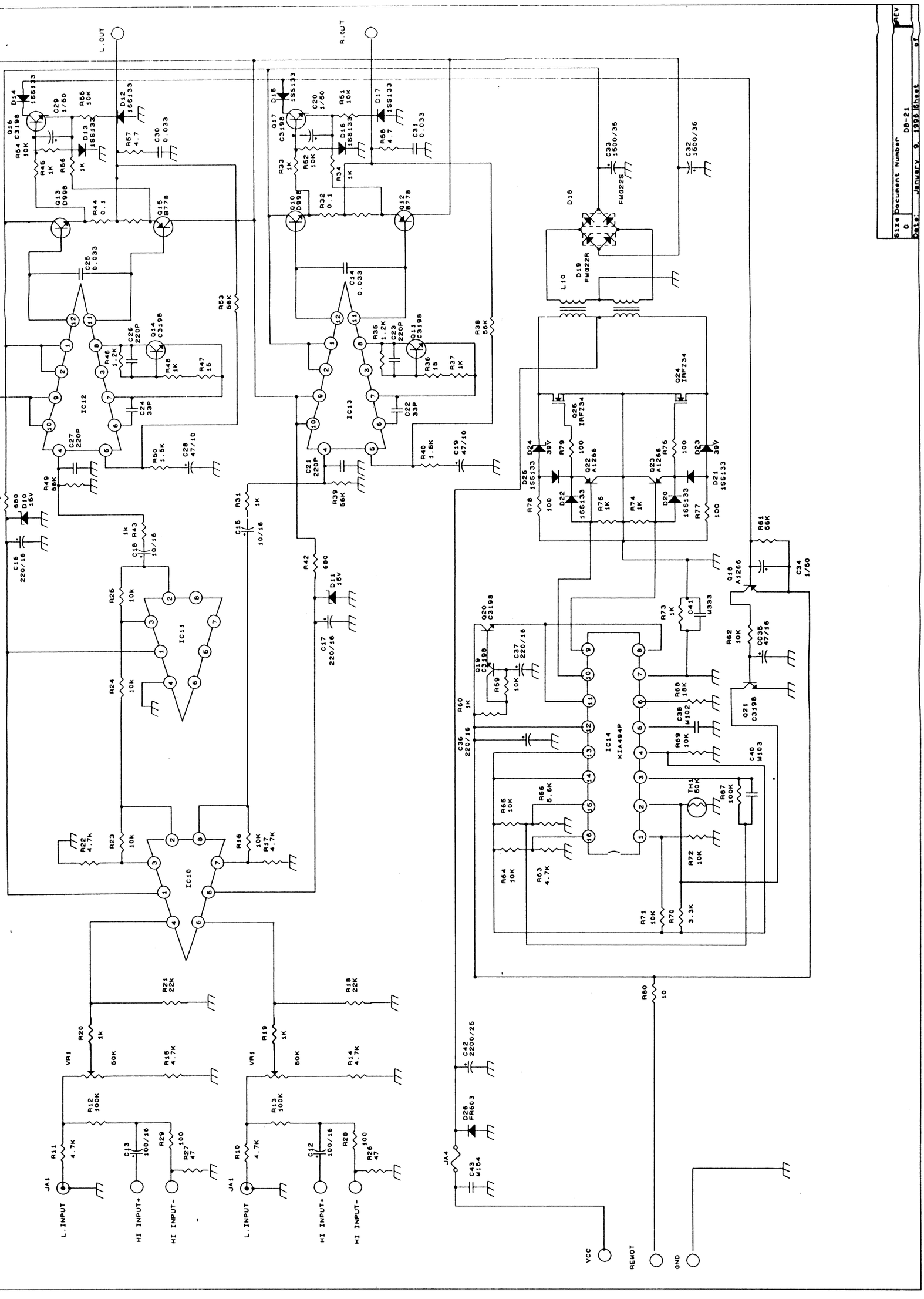
1. SPECIFICATIONS

- Regulated MOSFET PWM Power supply
- Bridgeable for 2-Channel or Monaural Mode operation
- Ground-Loop isolation input Circuit
- Adjustable Input Level Control
- Through-Output RCA (just in, just out)
- Speaker Lead Short Protection Circuit
- Thermal Protection Circuit
- Low AM Radio Frequency Interference
- Power-on LED(RED)
- HIGH LEVEL INPUT
- GOLD PLATED RCA, POWER & SPEAKER CONNECTORS

- TRIMODE
- AVERAGE POWER OUTPUT/CH INTO 4 ohms - 40w
- MAX POWER OUTPUT/CH INTO 4 ohms - 88w
- FREQUENCY RESPONSE (±1db) - 10Hz - 30KHz
- SIGNAL TO NOISE RATIO - 90dB
- INPUT SENSITIVITY/INTO 10K ohms load Impedance
  HIGH ------- 950mV
  LOW ------- 80mV
- THD ---------- 0.2%
- CHANNEL BALANCE ---------- 1 dB
- STEREO SEPARATION ---------- 50dB
- RMS CURRENT ---------- 10A
- FUSES ---------- 20A
- DIMENSION W ---------- 280
  H ---------- 50
  D ---------- 150
- NET WEIGHT ---------- 2.0kg

2. BLOCK DIAGRAM




L.OUT
R.OUT
IC10
IC11
IC12
IC13
IC14 KIA494P
L.INPUT
HI INPUT+
HI INPUT-
VCC
REMOT
GND
Size Document Number DB-21 REV
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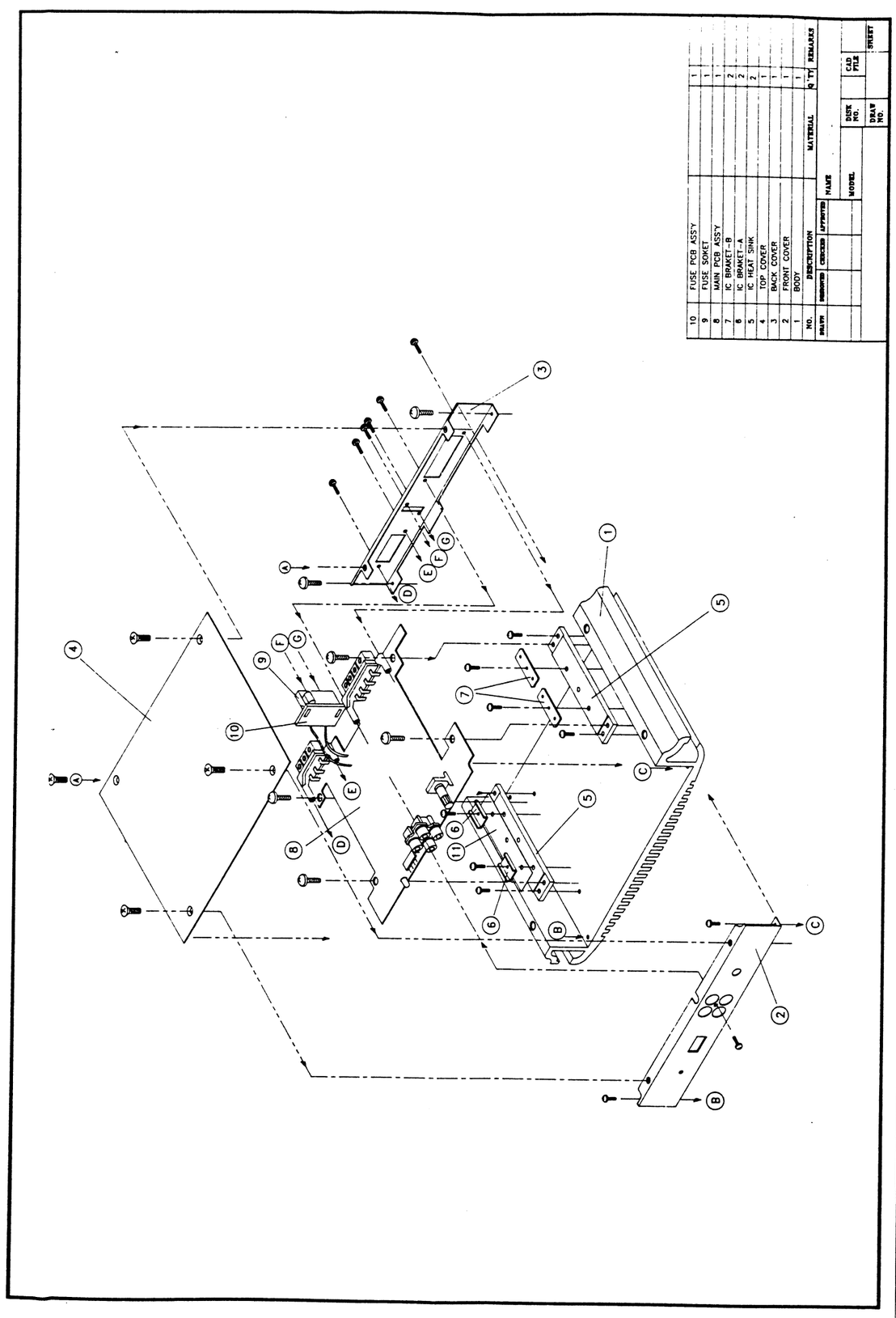
Date: January 9, 1998 Sheet of

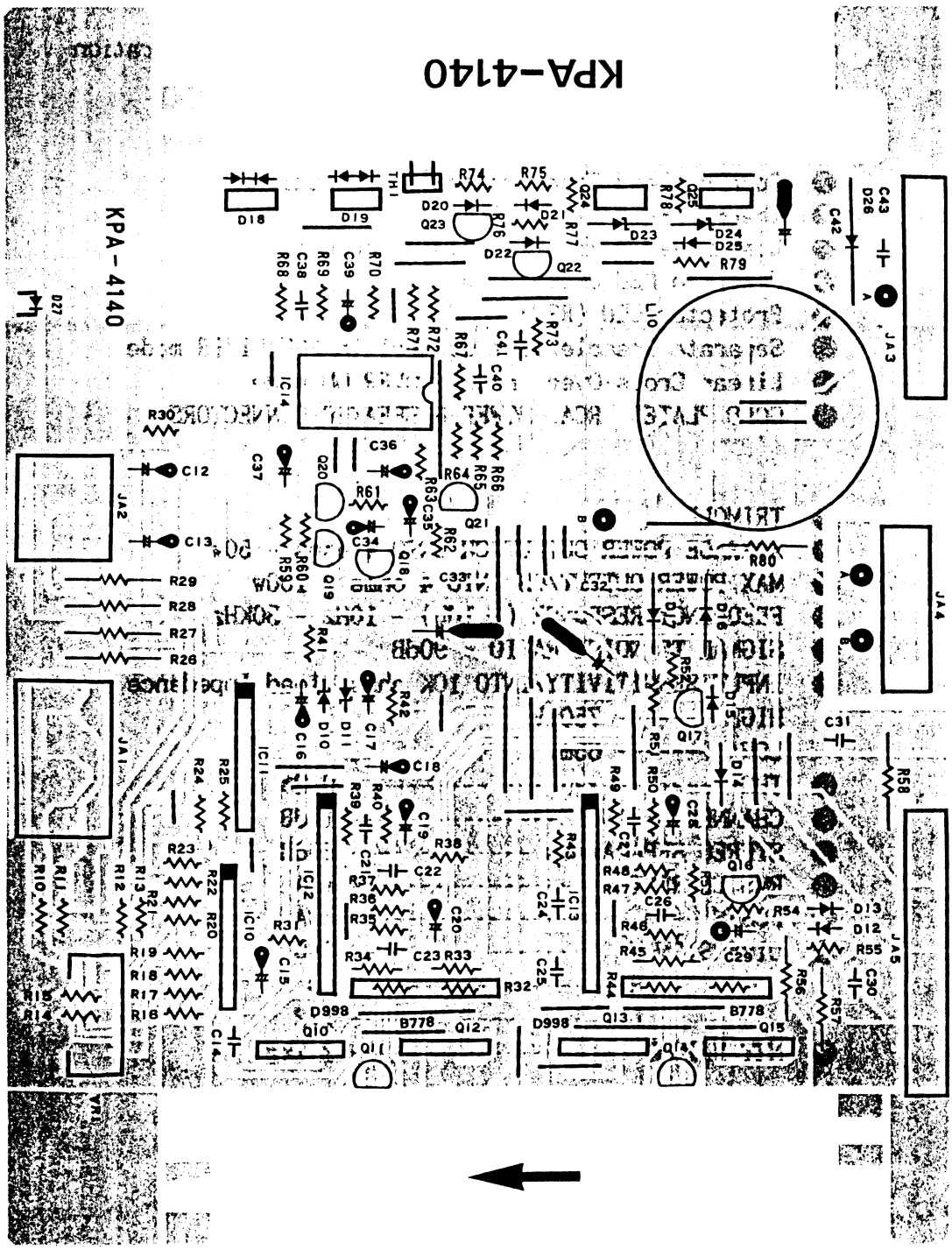


PART LIST

MODEL:DB-21
NAME :CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
1	Printed Circuit Board	190mmx162mmx1.6t	1	
2	OSC COIL	M2B 29	1	L10
	OSC COIL ASSEMBLY		1	L10
3	I.C	uPC1225H/ uPC1270H	2	IC12,IC13
4	SILICON DIODE	FMG22R/ ESAC25-02C	1	D19
5	SILICON DIODE	FMG22S/ ESAC25-02N	1	D18
6	MOS FET	IRFZ34/IRFIZ34/STP20N06	2	Q24,Q25
7	RCA JACK	JW4104D-1	1	JA1
8	AUTO FUSE	20A	1	
9	4PIN	LA1143-4	1	JA2
10	4PIN	CH1143-4	1	
11	THERMISTER (NTC)	50K, KT5D54F-C0080	1	TH1
12	FUSE HOLDER	H0448	1	JA4
13	I.C	KIA-494P	1	IC14
14	I.C	KIA4558S/ NJM2068LD	2	IC10,IC11
15	SI-TR.	KTD998	2	Q10,Q13
16	SI-TR.	KTB778	2	Q12,Q15
17	SI-TR.	KTA1266(Y) AT	3	Q18,Q22,Q23
18	SI-TR.	KTC3198(Y) AT / KTC1815(Y) AT	7	Q11,,Q14,,Q16,Q17,Q19,Q20,Q21
19	LED	KLR124	1	D27
20	DIODE	1SS133 AUTO 52mm	10	D12,D13,D14,D15.D16, D17,D20,D21,D22,D25
21	ZENER DIODE	TZ 39B (T25) 52mm/1W	2	D23,D24
22	ZENER DIODE	MTZ 15C AUTO 52mm	2	D10,D11
23	DIODE FAST RECOVERY	6A 100V GP30J/GI8922	1	D26
24	3P TERMINAL(BENDING)	JW-0603B	1	JA3
25	4P TERMINAL(BENDING)	JW-0604B	1	JA5
26	ROTARY VOLUME	V122 V Co 20RS B50K	1	VR1
27	R. Cement	MPR550/RGC22 0.1 ohm	2	R32,R44
28	R. 1/2W	10 ohm J	1	R80
29	R. 1/2W	4.7 ohm J	2	R57,R58
30	R. 1/2W	47 ohm J 52mm	2	R26,R27
31	R. 1/2W	100 ohm J 52mm	2	R28,R29
32	R. 1/6W	15 ohm J 52mm	2	R36,R47
33	R. 1/6W	100 ohm J 52mm	4	R75,R77,R78,R79
34	R. 1/6W	680 ohm J 52mm	2	R41,R42
35	R. 1/6W	1K ohm J 52mm	14	R19,R20,R31,R33,R34,R37,R43 R45,R48,R56,R60,R73,R74,R76
36	R. 1/6W	1.2Kohm J 52mm	2	R35,R46
37	R. 1/6W	1.5Kohm J 52mm	2	R40,R50
38	R. 1/6W	4.7Kohm J 52mm	9	R10,R11,R14,R15,R17 R22,R30,R63,R70
39	R. 1/6W	5.6Kohm J 52mm	3	R39,R49,R66
40	R. 1/6W	10K ohm J 52mm	15	R16,R23,R24,R25,R51,R52,R54 R55,R59,R62,R64 R64,R65,R69,R71,R72
41	R. 1/6W	18K ohm J 52mm	1	R68
42	R. 1/6W	22K ohm J 52mm	2	R18,R21
43	R. 1/6W	56K ohm J 52mm	3	R38,R53,R61
44	R. 1/6W	100Kohm J 52mm	3	R12,R13,R67
45	C. MYLAR/ TAPING	0.001uF 50WV J AUTO 52mm	1	C38
46	C. MYLAR/ TAPING	0.01 uF50WV J AUTO 52mm	1	C40
47	C. MYLAR/ TAPING	0.033 uF50WV J AUTO 52mm	5	C14,C25,C30,C31,C41
48	C. MYLAR/ TAPING	0.15 uF 50WV J AUTO 52mm	1	C43
49	CAPACITOR CERAMIC	HIKB 50V 33PF SL AUTO 52mm TAPING	2	C22,C24
50	CAPACITOR CERAMIC	HIKB 50V 220PF SL AUTO 52mm TAPING	4	C21,C23,C26,C27
51	Cap. Elec	SME 1 uF 50WV(D5x11) AUTO TAPING	3	C20,C29,C34
52	Cap. Elec	SME 10 uF 16WV(D5x11) AUTO TAPING	2	C15,C18
53	Cap. Elec	SME 47 uF 10WV(D5x11) AUTO TAPING	3	C19,C28,C35
54	Cap. Elec	SME 100 uF 16WV(D5x11) AUTO TAPING	3	C12,C13,C39
55	Cap. Elec	SME 220 uF 16WV(D5x11) AUTO TAPING	4	C16,C17,C36,C37
56	Cap. Elec	KME 1500uF 35WV(D12.5x25)AUTO TAPING	2	C32,C33
57	Cap. Elec	KMG 2200uF 25WV(D12.5x25)AUTO TAPING	1	C42

NO	Description		UNIT	REMARKS
58	STRIP JUMPER WIRE	17.5■■	3	
59	STRIP JUMPER WIRE	15■■	5	
60	STRIP JUMPER WIRE	12.5■■	6	
61	STRIP JUMPER WIRE	10■■	10	
62	STRIP JUMPER WIRE	7.5■■	11	
63	STRIP JUMPER WIRE	5■■	10	
64	JUMPER WIRE	AWM1015 16AWG RED 10- 80-10	2	FUSE HOLDER
65	SNOW BOX	E.P.S	2	
66	GIFT BOX		1	
67	POLY BAG(SET)	t0.08x280x380	1	
68	POLY BAG(ACCESARY)	t0.1 80x100	1	
69	MANUAL	ART PAPER 150	1	
70	CARTON BOX		0.25	
71	MODEL LABEL		1	
72	SOLDER BAR	SN 60:40		
73	SOLDER WIRE	SN 60:40	1	
74	SILICON GREASE	YG 6111		
75	FLUX			
76	HEAT SINK	180■■X39■■X150■■	1	
77	HEAT SINK	SUB (BAR) 5X24X110	2	
78	FRONT PANNEL	EGI 1t(SILK PRNTED)	1	
79	REAR PANNEL	EGI 1t(SILK PRNTED)	1	
80	COVER BOTTOM	EGI 1t(SPRAY)	1	
81	BRAKT 1.5T TR BRAKT A		1	
82	BRAKT 1.5T TR BRAKT B		1	
83	PAD 24X90		1	
84	TAPPING SCREW	T3x6 , TT2 BIND. YEL	9	
85	TAPPING SCREW	T3x10, TT2 BIND.BLK	4	
86	TAPPING SCREW	T3x12 , TT2, YEL	4	
87	TAPPING SCREW	T2x5 , PT2, BLACK	2	
88	MACHINE SCREW	M3x6 , FCT BLK	4	
89	TAPPING SCREW	T4x25 T1 BIND .YEL	4	ACCESSORY

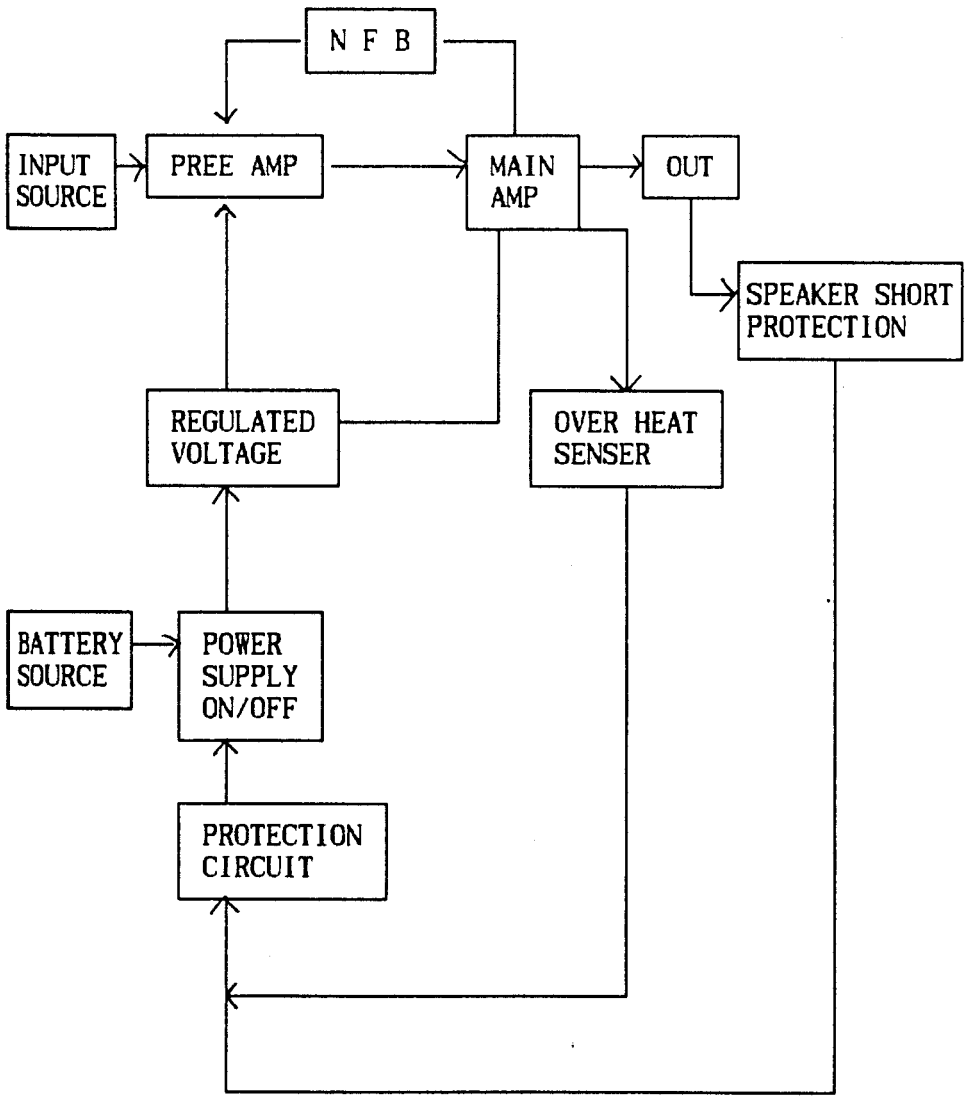

KPA-4140
KPA-4140

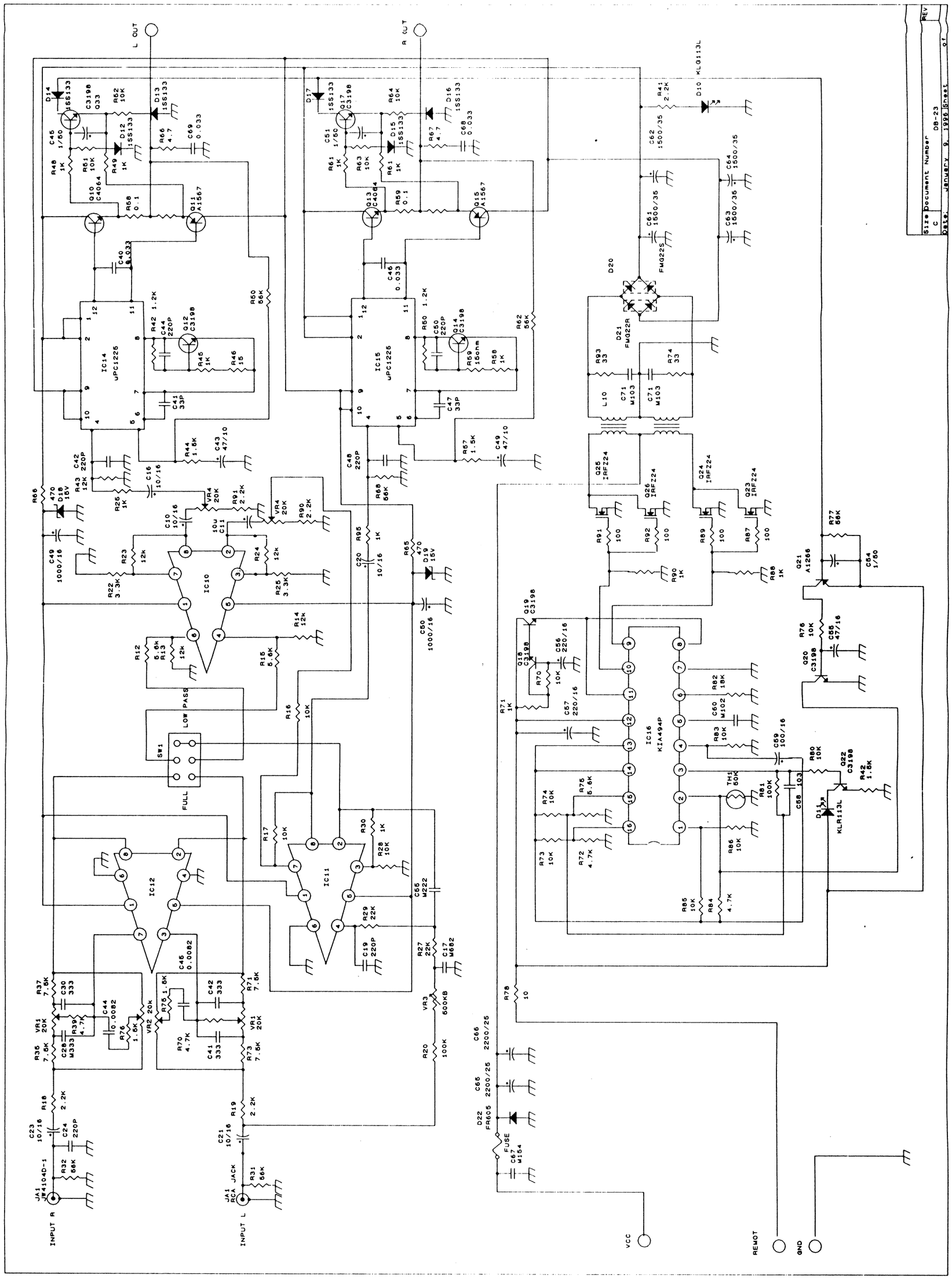
1. SPECIFICATIONS

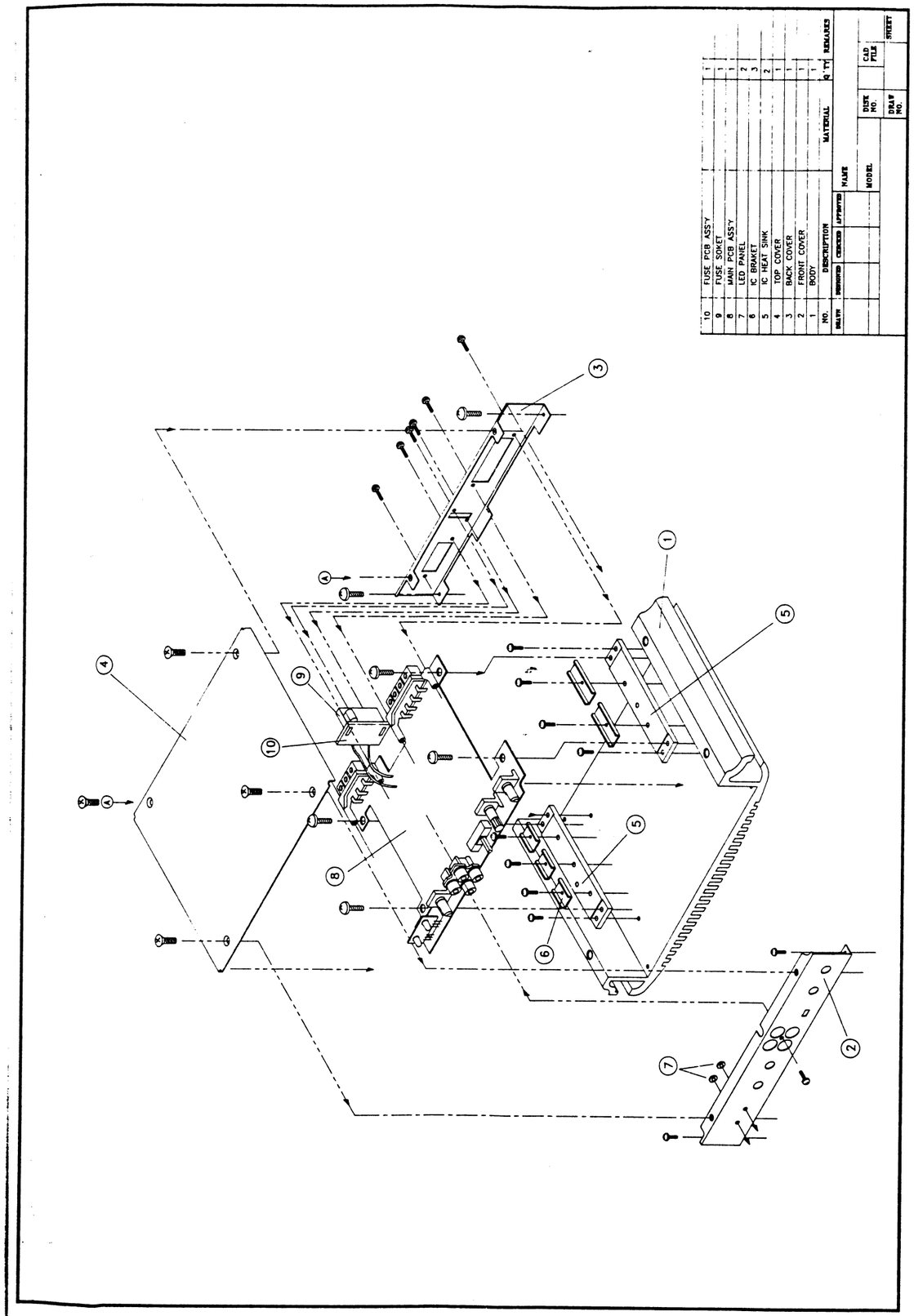
- Regulated MOSFET PWM Power supply
- Bridgeable for 2-Channel or Monaural Mode operation
- Ground-Loop isolation input Circuit
- Adjustable Input Level Control
- Through-Output RCA (just in, just out)
- Speaker Lead Short Protection Circuit
- Thermal Protection Circuit
- Low AM Radio Frequency Interference
- Power-on LED(GREEN)
- Protector LED (RED)
- Separate Treable/Bass Control in EQUALIZER mode
- Linear Cross-Over in CROSSOVER ON mode
- GOLD PLATED RCA, POWER & SPEAKER CONNECTORS

- TRIMODE
- AVERAGE POWER OUTPUT/CH INTO 4 ohms - 50w
- MAX POWER OUTPUT/CH INTO 4 ohms - 100w
- FREQUENCY RESPONSE (±1db) - 10Hz - 30KHz
- SIGNAL TO NOISE RATIO - 90dB
- INPUT SENSITIVITY/INTO 10K ohms load Impedance
  HIGH ------- 750mV
  LOW ------- 65mV
- THD ---------- 0.2%
- CHANNEL BALANCE ---------- 1 dB
- STEREO SEPARATION ---------- 50dB
- RMS CURRENT ---------- 13A
- FUSES ---------- 20A
- DIMENSION W ---------- 280
  H ---------- 50
  D ---------- 172
- NET WEIGHT ---------- 2.7kg

2. BLOCK DIAGRAM




L OUT
R OUT
IC14 uPC1226
IC15 uPC1226
IC10
IC11
IC12
IC16 KIA494P
LOW PASS
FULL
SW1
INPUT R
INPUT L
JA1 JACK
JA1 RCA
VCC
REMOT
GND
Size Document Number
DB-23
Date: January 9, 1996 Sheet
REV

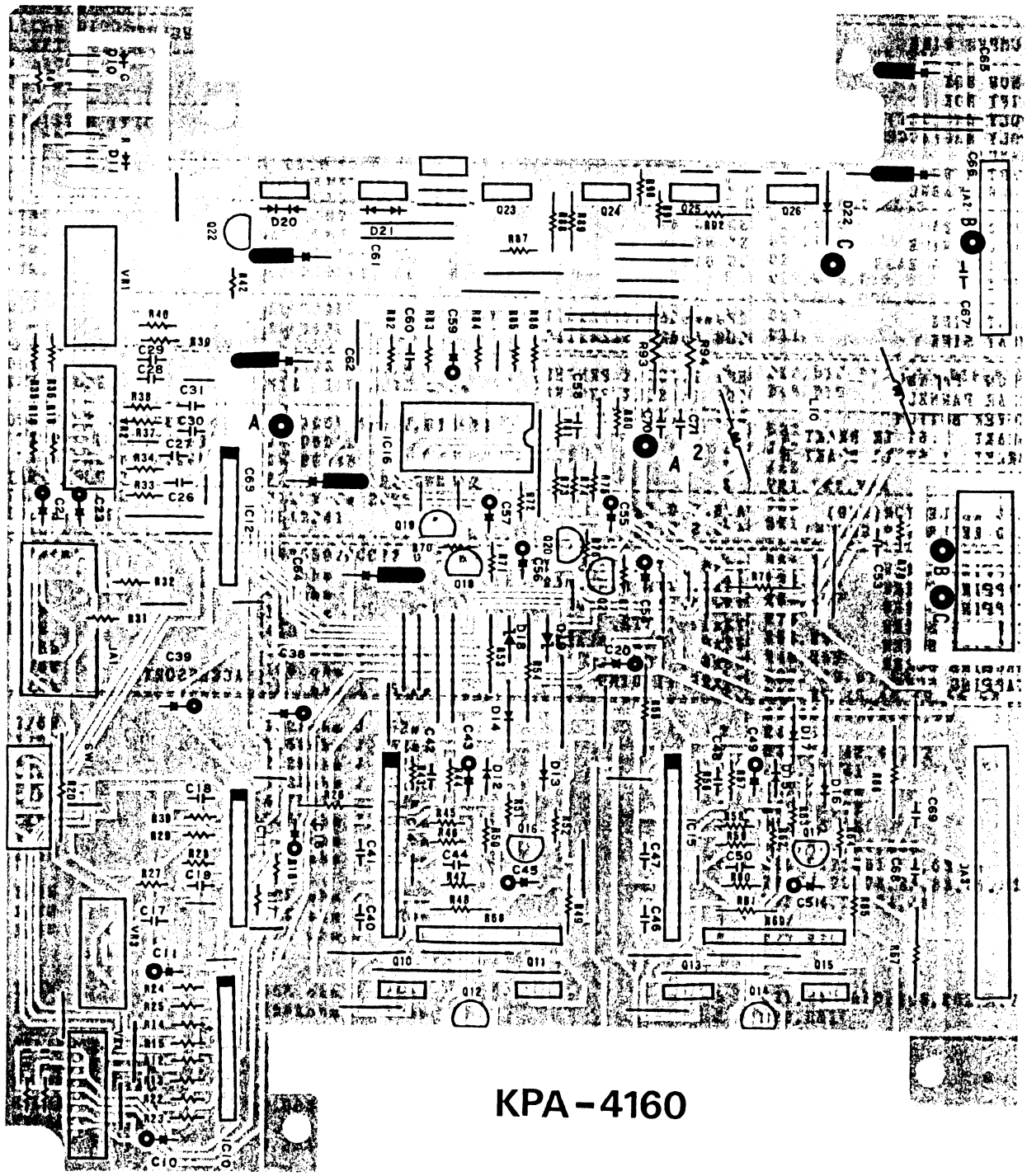


PART LIST

MODEL :DB-23
NAME :CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
1	Printed Circuit Board	193mmX190mmX1.6t	1	
2	OSC COIL ASSEMBLY	ZF-42915-TC	1	L10
	CORE	ZF-42915-TC	1	
3	I.C	uPC1225H/ uPC1270H	2	IC14,IC15
4	SILICON DIODE	FMG22R/ ESAC25-02C	1	D21
5	SILICON DIODE	FMG22S/ ESAC25-02N	1	D20
6	MOS FET	IRFZ24/IRFIZ24/STP20N06	4	Q23,Q24,Q25,Q26
7	RCA JACK	JW4104D - 1	1	JA1
8	AUTO FUSE	20A	1	
9	THERMISTER (NTC)	50K, KT5D54F-C0080	1	TH1
10	FUSE HOLDER	H0448	1	
11	I.C	KIA-494P	1	IC16
12	I.C	KIA4558S/ NJM2068LD	3	IC10,IC11,IC12
13	SI-TR.	2SA1567	2	Q11,Q15
14	SI-TR.	2SC4064	2	Q10,Q13
15	SI-TR.	KTA1266(Y) AT	1	Q21
16	SI-TR.	KTC3198(Y) AT / KTC1815(Y) AT	8	Q12,Q14,Q16,Q17 Q18,Q19,Q20,Q22
17	LED	KLG113L	1	D10
18	LED	KLR113L	1	D11
19	DIODE	1SS133 AUTO 52mm	6	D12,D13,D14,D15,D16.D17
20	ZENER DIODE	MTZ 15C AUTO 52mm	2	D18,D19
21	DIODE FAST RECOVERY	6A 100V GP30J/GI8922	1	D22
22	3P TERMINAL(BENDING)	JW-0603B	1	JA2
23	4P TERMINAL(BENDING)	JW-0604B	1	JA3
24	ROTARY VOLUME	RK14K1210102-20KBX2	3	VR1,VR2,VR4
25	ROTARY VOLUME	V12 V Co 20RS B500K	1	VR3
26	SLIDE SWITCH	KSA2241	1	SW1
27	R. Cement	MPR550/RGC22 0.1 ohm	2	R68,R69
28	R 1W	33 ohm	2	R93,R94
29	R 1/2W	4.7ohm	2	R66,R67
30	R 1/2W	10 ohm	1	R78
31	R 1/2W	470 ohm	2	R53,R54
32	R. 1/6W	15 ohm J 52mm	2	R46,R59
33	R. 1/6W	100 ohm J 52mm	4	R87, 89,91,92
34	R. 1/6W	1K ohm J 52mm	13	R26,30,45,48,49,55,58 61,65,71,79,88,90
35	R. 1/6W	1.2Kohm J 52mm	2	R47,60
36	R. 1/6W	1.5Kohm J 52mm	5	R33,34,42,44,57
37	R. 1/6W	2.2Kohm J 52mm	3	R10,11,41
37	R. 1/6W	3.3Kohm J 52mm	3	R22,25,84
38	R. 1/6W	4.7Kohm J 52mm	3	R39,40,72
39	R. 1/6W	5.6Kohm J 52mm	3	R12,15,75
40	R. 1/6W	7.5Kohm J 52mm	4	R35,R36,37,R38
41	R. 1/6W	10K ohm J 52mm	15	R16,R17,R51,52,63,64 70,76,73,74,80,83,85,8
42	R. 1/6W	12K ohm J 52mm	5	R13,14,23,24,43
43	R. 1/6W	18K ohm J 52mm	1	R82
44	R. 1/6W	22K ohm J 52mm	3	R27,R28
45	R. 1/6W	56K ohm J 52mm	6	R31,R32,R50,R56,R62,R7
46	R. 1/6W	100Kohm J 52mm	2	R20,R81
48	C. MYLAR/ TAPING	0.001uF 50WV J AUTO 52mm	1	C60
49	C. MYLAR/ TAPING	0.0022uF50WV J AUTO 52mm	1	C18
50	C. MYLAR/ TAPING	0.0068uF50WV J AUTO 52mm	1	C17
51	C. MYLAR/ TAPING	0.0082uF50WV J AUTO 52mm	2	C26,27
52	C. MYLAR/ TAPING	0.01uF 50WV J AUTO 52mm	3	C58,C70,C71
53	C. MYLAR/ TAPING	0.033uF 50WV J AUTO 52mm	9	C28,C29,C30,C31 C40,C46,C53,C68,C69
54	C. MYLAR/ TAPING	0.15 uF 50WV J AUTO 52mm	1	C67
55	CAPACITOR CERAMIC	HIKB 50V 33PF SL AUTO 52mm TAPING	2	C41,C47
57	CAPACITOR CERAMIC	HIKB 50V 220PF SL AUTO 52mm TAPING	5	C19,C42,C44,C48,C50
58	Cap. Elec	SME 1 uF 50WV(5x11) AUTO TAPING	3	C45,C51,C54
59	Cap. Elec	SME 10 uF 16WV(5x11) AUTO TAPING	6	C10,C11,C16,C20,C21,C23
60	Cap. Elec	SME 47 uF 10WV(5x11) AUTO TAPING	3	C43,C49,C55
61	Cap. Elec	SME 100 uF 16WV(5x11) AUTO TAPING	1	C59
61	Cap. Elec	SME 220 uF 16WV(5x11) AUTO TAPING	2	C56,C57
62	Cap. Elec	KME 1000uF 16WV(18x25) AUTO TAPING	2	C38,C39
62	Cap. Elec	KME 1500uF 35WV(18x25) AUTO TAPING	4	C61,C62,C63,C64
63	Cap. Elec	KMG 2200uF 25WV(12.5x25)AUTO TAPING	2	C65,C66

NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
64	STRIP JUMPER WIRE	17.5㎜	6	
65	STRIP JUMPER WIRE	15㎜	8	
66	STRIP JUMPER WIRE	12.5㎜	10	
67	STRIP JUMPER WIRE	10㎜	15	
68	STRIP JUMPER WIRE	7.5㎜	14	
69	STRIP JUMPER WIRE	5㎜	26	
70	JUMPER WIRE	AWM1015 16AWG RED 10- 80-10	3	FUSE HOLDER
71	SNOW BOX	E.P.S	2	
72	GIFT BOX		1	
73	POLY BAG(SET)	t0.08x280x380	1	
74	POLY BAG(ACCESARY)	t0.1 80x100	1	
75	MANUAL	ART PAPER 150	1	
76	CARTON BOX		0.25	
77	MODEL LABEL		1	
78	SOLDER BAR	SN 60:40		
79	SOLDER WIRE	SN 60:40		
80	SILICON GREASE	YG 6111		
81	FLUX			
82	HEAT SINK	280㎜㎜56㎜X172㎜(1,840KG/PC)	1	
83	HEAT SINK	SUB (BAR) 5X24X110	2	
84	FRONT PANNEL	EGI 1t(SILK PRNTED)	1	
85	REAR PANNEL	EGI 1t(SILK PRNTED)	1	
86	COVER BOTTOM	EGI 1t(SPRAY)	1	
87	BRAKT 1.5T TR BRAKT A		3	
88	BRAKT 1.5T TR BRAKT B		2	
89	PAD 24X90		1	
90	LED REFLECTOR(RED)	A.B.S 0.5g	1	
91	LED REFLECTOR(GREEN)	A.B.S 0.5g	1	
92	TAPPING SCREW	T3x6 , TT2 BIND. YEL	9	
93	TAPPING SCREW	T3x8, TT2 BIND.BLK	5	
94	TAPPING SCREW	T3x10, TT2 BIND.YEL	4	
95	TAPPING SCREW	T3x12 , TT2, YEL	5	
96	TAPPING SCREW	T2x5 , PT2, BLACK	2	
97	MACHINE SCREW	M3x6 , FCT BLK	4	
98	TAPPING SCREW	T4x25 T1 BIND .YEL	4	ACCESSORY



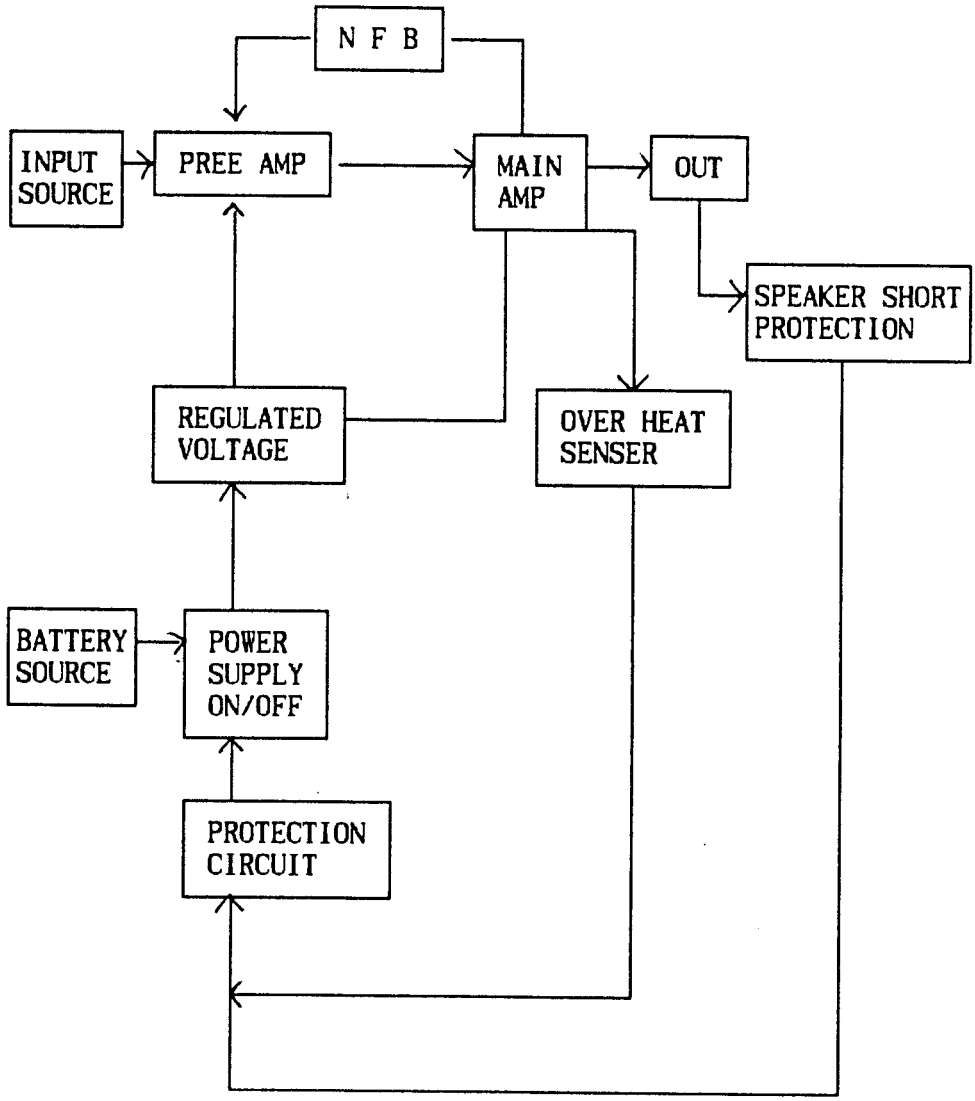
KPA-4160

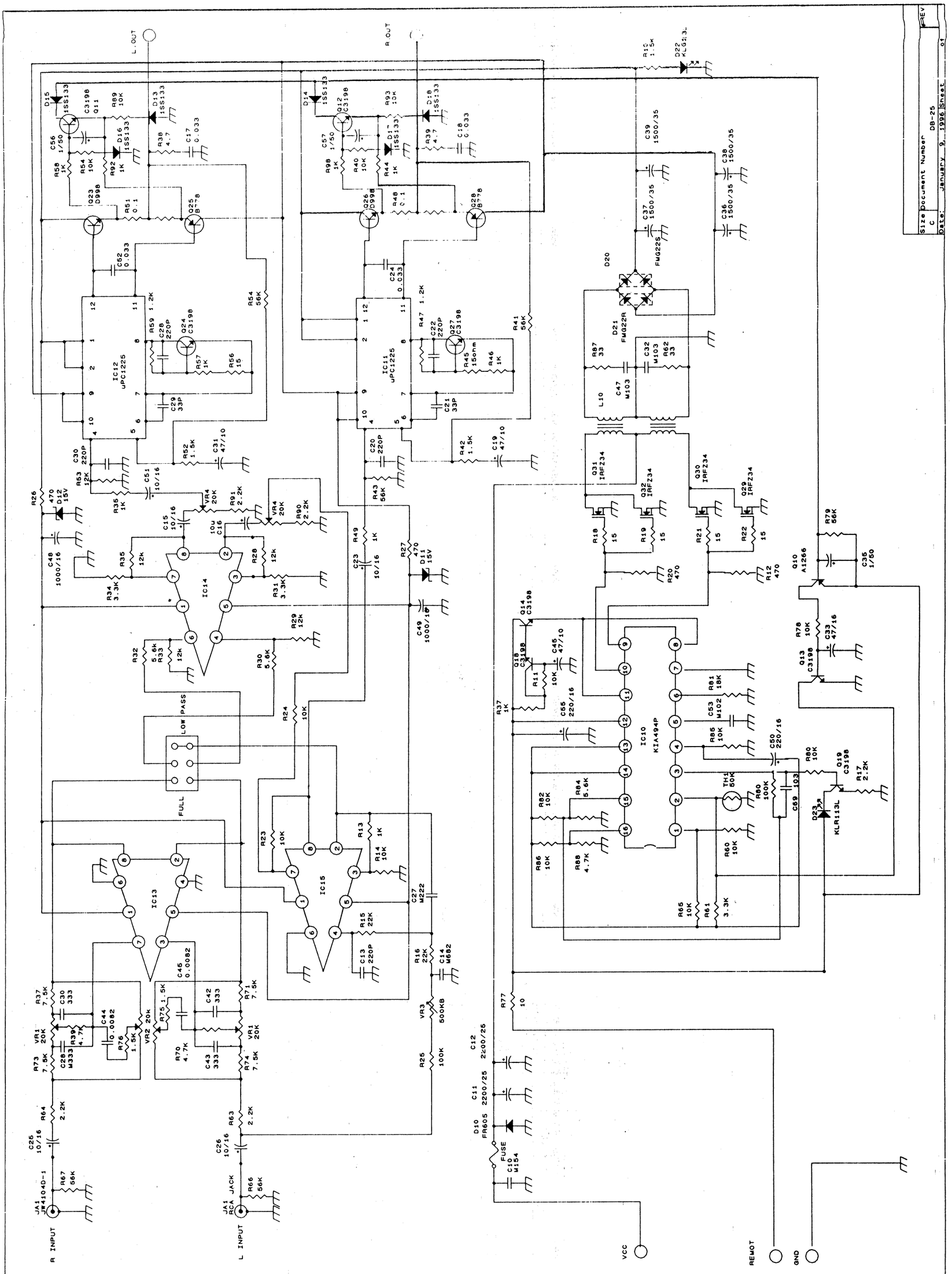
1. SPECIFICATIONS

- Regulated MOSFET PWM Power supply
- Bridgeable for 2-Channel or Monaural Mode operation
- Ground-Loop isolation input Circuit
- Adjustable Input Level Control
- Through-Output RCA (just in, just out)
- Speaker Lead Short Protection Circuit
- Thermal Protection Circuit
- Low AM Radio Frequency Interference
- Power-on LED(GREEN)
- Protector LED (RED)
- Separate Treable/Bass Control in EQUALIZER mode
- Linear Cross-Over in CROSSOVER ON mode
- GOLD PLATED RCA, POWER & SPEAKER CONNECTORS

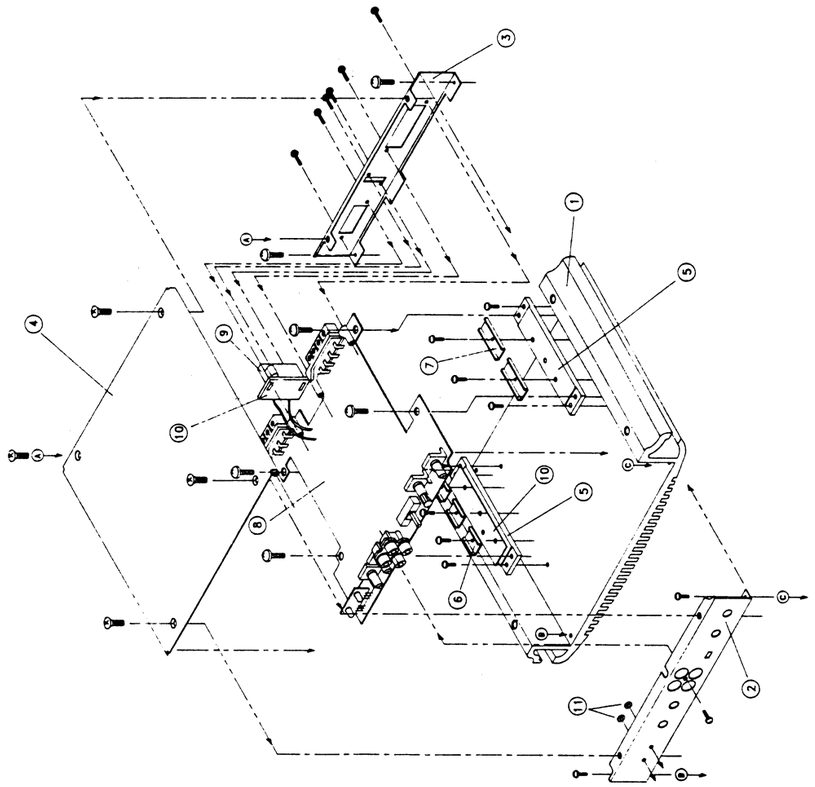
- TRIMODE
- AVERAGE POWER OUTPUT/CH INTO 4 ohms - 80w
- MAX POWER OUTPUT/CH INTO 4 ohms - 150w
- FREQUENCY RESPONSE (±1db) - 10Hz - 30KHz
- SIGNAL TO NOISE RATIO - 90dB
- INPUT SENSITIVITY/INTO 10K ohms load Impedance
  HIGH ------- 900mV
  LOW ------- 90mV
- THD ---------- 0.2%
- CHANNEL BALANCE ---------- 1 dB
- STEREO SEPARATION ---------- 50dB
- RMS CURRENT ---------- 20A
- FUSES ---------- 30A
- DIMENSION W ---------- 280
  H ---------- 50
  D ---------- 200
- NET WEIGHT ---------- 3.2kg

2. BLOCK DIAGRAM





MODEL: DB-25AB-25



NO.	DESCRIPTION	Q'TY	REMARKS
11	LED PANEL	2	
10	FUSE PCB ASS'Y	1	
9	FUSE SOKET	1	
8	MAIN PCB ASS'Y	1	
7	IC BRAKET-B	2	
6	IC BRAKET-A	3	
5	IC HEAT SINK	2	
4	TOP COVER	1	
3	BACK COVER	1	
2	FRONT COVER	1	
1	BODY	1	

MATERIAL / DESCRIPTION / CHECKED / APPROVED / NAME / MODEL / DISK NO. / DRAW NO. / OLD FILE / SHEET

MODEL:DB-25
NAME :CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATIION	UNIT	REMARKS
1	Printed Circuit Board	217mmX190mmX1.6T	1	
2	OSC COIL ASSEMBLY	ZF43620-TC	1	L10
	CORE	ZF43620-TC	1	
3	I.C	UPC1225H/ UPC1270H	2	IC11,IC12
4	SILICON DIODE	FMG22R/ ESAC25-02C	1	D21
5	SILICON DIODE	FMG22S/ ESAC25-02N	1	D20
6	MOS FET	IRFZ34/IRFIZ34/STP30N06	4	Q29,Q30,Q31,Q32
7	RCA JACK	JW4104D - 1	1	JA1
8	AUTO FUSE	30A	1	
9	THERMISTER (NTC)	50K, KT5D54F-C0080	1	TH1
10	FUSE HOLDER	H0448	1	
11	I.C	KIA494P	1	IC10
12	I.C	KIA4558S/ NJM2068LD	3	IC13,IC14,IC15
13	SI-TR.	KTB778/KTB688/2SA1567	2	Q25,Q28
14	SI-TR.	KTD998/KTD718/2SC4064	2	Q23,Q26
15	SI-TR.	KTA1266(Y) AT	1	Q10
16	SI-TR.	KTC3198(Y) AT	8	Q11,Q12,Q13,Q14,Q16,Q19,Q24,Q27
17	LED	KLG113L	1	D22
18	LED	KLR113L	1	D23
19	DIODE	1SS133 AUTO 52mm	6	D13,D14,D15,D16,D17,D18
20	ZENER DIODE	MTZ 15C AUTO 52mm	2	D11,D12
21	DIODE FAST RECOVERY	6A 100V GP30J/GI8922	1	D10
22	3P TERMINAL(BENDING)	JW-0603B	1	JA2
23	4P TERMINAL(BENDING)	JW-0604B	1	JA3
24	ROTARY VOLUME	RK14K1210102-20KBX2	3	VR1,VR2,VR4
25	ROTARY VOLUME	V12 V Co 20RS B500K	1	VR3
26	SLIDE SWITCH	KSA2241/SSSU142NC	1	SW1
27	R. Cement	MPR550/RGC22 0.1 ohm	2	R48,R51
28	R 1W	33 ohm	2	R62,R87
29	R 1/2W	4.7ohm	2	R38,R39
30	R 1/2W	10 ohm	1	R77
31	R 1/2W	470 ohm	2	R26,R27
32	R. 1/6W	15 ohm J 52mm	6	R18,R19,R21,R22,R45,R56
33	R. 1/6W	470 ohm J 52mm	2	R12,R20
34	R. 1/6W	1K ohm J 52mm	11	R13,R37,R44,R46,R49 R53,R57,R58,R68,R92,R98
35	R. 1/6W	1.2Kohm J 52mm	2	R47,R59
36	R. 1/6W	1.5Kohm J 52mm	5	R10,R42,R52,R75,R76
37	R. 1/6W	2.2Kohm J 52mm	3	R17,R90,R91
37	R. 1/6W	3.3Kohm J 52mm	3	R61,R31,R34
38	R. 1/6W	4.7Kohm J 52mm	3	R69,R70,R88
39	R. 1/6W	5.6Kohm J 52mm	3	R30,R32,R84
40	R. 1/6W	7.5Kohm J 52mm	4	R71,R72,R73,R74
41	R. 1/6W	10K ohm J 52mm	15	R11,R14,R23,R24,R40,R54,R60 R65,R78,R82,R83,R85,R86,R89,R93
42	R. 1/6W	12K ohm J 52mm	5	R28,R29,R33,R36,R53
43	R. 1/6W	18K ohm J 52mm	1	R81
44	R. 1/6W	22K ohm J 52mm	2	R15,R16
45	R. 1/6W	56K ohm J 52mm	6	R41,R43,R55,R66,R67,R79
46	R. 1/6W	100Kohm J 52mm	2	R25,R80
48	C. MYLAR/ TAPING	0.001uF 50WV J AUTO 52mm	1	C53
49	C. MYLAR/ TAPING	0.0022uF50WV J AUTO 52mm	1	C27
49	C. MYLAR/ TAPING	0.0068uF50WV J AUTO 52mm	1	C14
51	C. MYLAR/ TAPING	0.0082uF50WV J AUTO 52mm	2	C44,C45
52	C. MYLAR/ TAPING	0.01uF 50WV J AUTO 52mm	3	C32,C47,C69
53	C. MYLAR/ TAPING	0.033uF 50WV J AUTO 52mm	9	C17,C18,C24,C34, C40,C41,C42,C43,C52
54	C. MYLAR/ TAPING	0.15 uF 50WV J AUTO 52mm	1	C10
56	CAPACITOR CERAMIC	HIKB 50V 33PF SL AUTO 52mm TAPING	2	C21,C29
57	CAPACITOR CERAMIC	HIKB 50V 220PF SL AUTO 52mm TAPING	5	C13,C22,C28,C30,C43
58	Cap. Elec	SME 1 uF 50WV(5x11)AUTO TAPING	3	C35,C56,C57
59	Cap. Elec	SME 10 uF 16WV(5x11)AUTO TAPING	6	C15,C16,C23,C25,C26,C51
60	Cap. Elec	SME 47 uF 10WV(5x11)AUTO TAPING	3	C19,C31,C33
61	Cap. Elec	SME 100 uF 16WV(5x11)AUTO TAPING	1	C50
62	Cap. Elec	SME 220 uF 16WV(8x11.5)AUTO TAPING	2	C46,C55
63	Cap. Elec	SME 1000uF 16WV(12.5X16)AUTO TAPING	2	C48,C49
64	Cap. Elec	KME 1500uF 35WV(16x25)AUTO TAPING	4	C36,C37,C38,C39
65	Cap. Elec	KMG 2200uF 25WV(12.5x25)AUTO TAPING	2	C11,C12

NO	DESCRIPTION	SPECIFICATIION	UNIT	REMARKS
66	STRIP JUMPER WIRE	17.5㎜	13	
67	STRIP JUMPER WIRE	15㎜	4	
68	STRIP JUMPER WIRE	12.5㎜	3	
69	STRIP JUMPER WIRE	10㎜	20	
70	STRIP JUMPER WIRE	7.5㎜	13	
71	STRIP JUMPER WIRE	5㎜	44	R63,R64
72	JUMPER WIRE	AWM1015 16AWG RED 10- 80-10	4	FUSE HOLDER
73	SNOW BOX	E.P.S	2	
74	GIFT BOX		1	
75	POLY BAG(SET)	t0.08x280x380	1	
76	POLY BAG(ACCESARY)	t0.1 80x100	1	
77	MANUAL	ART PAPER 150	1	
78	CARTON BOX		0.25	
79	MODEL LABEL		1	
80	SOLDER BAR	SN 60:40		
81	SOLDER WIRE	SN 60:40		
82	SILICON GREASE	YG 6111		
83	FLUX			
84	HEAT SINK	280㎜X56㎜X200㎜(1,840KG/PC)	1	
85	HEAT SINK	SUB (BAR) 5X24X110	2	
86	FRONT PANNEL	EGI 1t(SILK PRNTED)	1	
87	REAR PANNEL	EGI 1t(SILK PRNTED)	1	
88	COVER BOTTOM	EGI 1t(SPRAY)	1	
89	BRAKT 1.5T TR BRAKT A		3	
90	BRAKT 1.5T TR BRAKT B		2	
91	PAD 24X90		1	
92	LED REFLECTOR(RED)	A.B.S 0.5g	1	
93	LED REFLECTOR(GREEN)	A.B.S 0.5g	1	
94	TAPPING SCREW	T3x6 , TT2 BIND. YEL	9	
95	TAPPING SCREW	T3x8, TT2 BIND.BLK	5	
96	TAPPING SCREW	T3x10, TT2 BIND.YEL	4	
97	TAPPING SCREW	T3x12 , TT2, YEL	5	
98	TAPPING SCREW	T2x5 , PT2, BLACK	2	
99	MACHINE SCREW	M3x6 , FCT BLK	4	
100	TAPPING SCREW	T4x25 T1 BIND .YEL	4	ACCESSORY

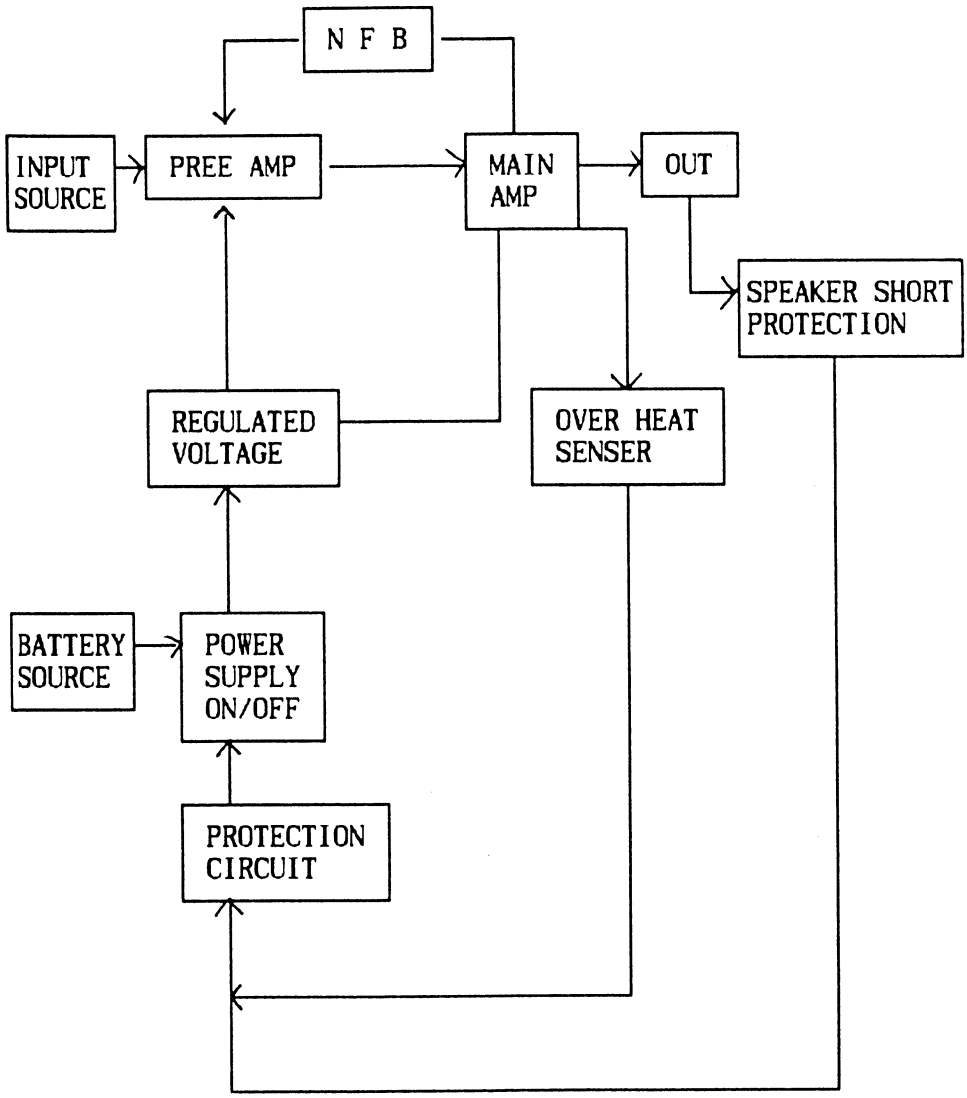
Fuse
JA2
JA3
JA1
L10
IC10
IC13
IC14
IC15
SW1
VR1
VR2
VR3
C10
C11
C12
C17
C18
C25
C26
C34
C35
C51
C52
R35
R38
R39
R64
R65
R66
R67
R68
R69
R70
R72
R73
R74
R79
R80
R81
R82
R83
R84
R85
R86
R87
R88
R90
R91
Q19
Q22
Q23
D22
D23

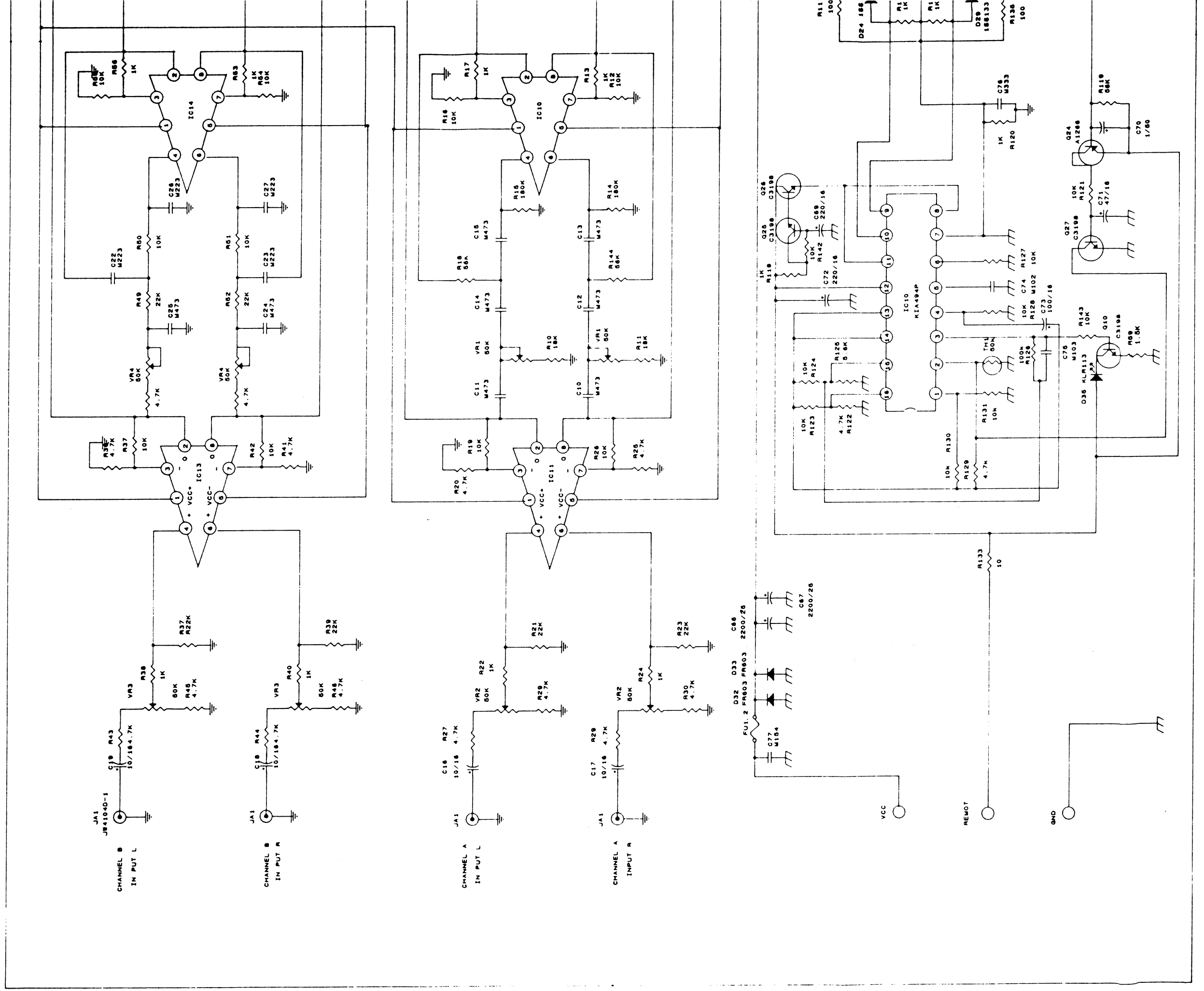
1. SPECIFICATIONS

- MOSFET POWER SUPPLY CIRCUITRY
- BRIDGEABLE OUTPUT POWER
- TRIMODE OUTPUT POWER
- GROUND-LOOP ISOLATION INPUT CIRCUITRY
- ADJUSTABLE INPUT LEVEL CONTROL
- SELECTABLE HIGH PASS FILTER FOR CH.A. WITH LINEAR LOW-FREQUENCY-CUT CROSSOVER FOR 40Hz～250Hz
- SELECTABLE LOW PASS FILTER FOR CH.B. WITH LINEAR HIGH FREQUENCY-CUT CROSSOVER FOR 40Hz～250Hz
- PROTECTIONS.
  - SPEAKER LEAD SHORT PROTECTION
  - THERMAL PROTECTION
  - REVERSE POLARITY PROTECTION
- POWER ON LED (GREEN): "ON" WITH POWER
- PROTECTION LED (RED): "ON" IN TROUBLE

- TRIMODE
- AVERAGE POWER OUTPUT/CH INTO 4 ohms - 50w x 4
- MAX POWER OUTPUT/CH INTO 4 ohms - 80w x 4
- FREQUENCY RESPONSE (±1db) - 10Hz - 30KHz
- SIGNAL TO NOISE RATIO - 90dB
- INPUT SENSITIVITY/INTO 10K ohms load Impedance
  HIGH ------- 850mV
  LOW ------- 85mV
- THD ---------- 0.2%
- CHANNEL BALANCE ---------- 1 dB
- STEREO SEPARATION ---------- 50dB
- RMS CURRENT ---------- 27A
- FUSES ---------- 40A
- DIMENSION W ---------- 280
  H ---------- 50
  D ---------- 294
- NET WEIGHT ---------- 4.1kg

2. BLOCK DIAGRAM




IC14
IC13
IC10
IC11
IC10 KIA4949P
R66 1K
R83 1K
R84 10K
R49 22K
R62 22K
R50 10K
R61 10K
VR4 50K
4.7K
R36 4.7K
R37 10K
R42 10K
R41 4.7K
R17 1K
R13 1K
R12 10K
R16 10K
R15 180K
R14 180K
R18 56K
R144 56K
R10 18K
R11 18K
R19 10K
R20 4.7K
R26 10K
R25 4.7K
R37 22K
R38 1K
R45 4.7K
R39 22K
R40 1K
R46 4.7K
R43 4.7K
R44 4.7K
R21 22K
R22 1K
R29 4.7K
R27 4.7K
R23 22K
R24 1K
R30 4.7K
R29 4.7K
C22 W223
C28 W223
C27 W223
C23 W223
C25 W473
C24 W473
C15 W473
C13 W473
C14 W473
C12 W473
C11 W473
C10 W473
C18 10/16
C19 10/16
C17 10/16
C16 10/16
JA1 JR41040-1
CHANNEL B IN PUT L
CHANNEL B IN PUT R
CHANNEL A IN PUT L
CHANNEL A INPUT R
R111 100
R1 1K
R2 1K
D24 1SS
D29 1SS133
R136 100
C75 W333
R120 1K
R110 68K
C70 1/50
Q24 A1266
R121 10K
C71 47/16
Q27 C3198
Q26 C3198
Q25 C3198
C69 220/16
R142 10K
R119 1K
C72 220/16
R127 10K
C74 W102
C73 100/16
R128 10K
R143 10K
Q10 C3198
R69 1.5K
C76 W103
D36 KLR113
TH1 50K
100K R125
R126 5.6K
R124 10K
R123 10K
R122 4.7K
R131 10K
R130 10K
R129 4.7K
R133 10
C66 2200/25
C67 2200/25
D33 FR603
D32 FR603
FU1.2
C77 W104
VCC
REMOT
GND

R56 10K
R56 1K
LOW PASS
OFF ON
R33 10K
R34 10K
R63 1K
R64 10K
C81 220/16
C82 220/16
D28 16V
R110 470 1/2
16V
C21 10/16
R57 1K
R86 56K
C30 220P
IC15 uPC1225
C28 0.033
R91 1.2K
C31 220P
Q13 C3198
C29 33P
R87 1.6K
C32 47/10
R90 1K
R89 15
R88 56K
D16 1S6133
R92 1K
C33 1/60
Q11 C3198
R139 10K
Q33 D998
R95 1K
D17 1S6133
R94 10K
R93 0.1
R96 4.7
D18 1S6133
C34 0.033
Q34 B778
CHANNEL B L.OUT
IC12
C37 10/16
R97 1K
R32 10K
R31 10K
R109 470 1/2
C82 220/16
C81 220/16
D27 16V
R98 56K
C38 220P
IC16 uPC1225
C36 0.033
R102 1.2K
C40 220P
Q14 C3198
C36 33P
R99 1.5K
C39 47/10
R100 15
R101 1K
R140 56K
D19 1S6133
R103 1K
C41 1/60
Q12 C3198
R107 10K
Q35 D998
R105 1K
D21 1S6133
R108 10K
R104 0.1
R106 4.7
D20 1S6133
C18 0.033
Q36 B778
CHANNEL B R.OUT
R17 1K
HI PASS
OFF ON
R13 1K
R12 10K
C43 10/16
R73 1K
C20 10/16
R60 1K
R/L CH SAME AS ABOVE
R117 100
D26 39V
D25 1S6133
D24 1S6133
Q23 A1266
R114 1K
R136 1K
Q28 A1266
D29 1S6133
D30 1S6133
R135 100
D31 39V
Q22 IRFIZ24
Q21 IRFIZ24
Q20 IRFIZ24
Q19 IRFIZ24
R116 100
R115 100
R114 100
R113 100
R137 100
R138 100
R134 100
R132 100
Q29 IRFIZ24
Q30 IRFIZ24
Q31 IRFIZ24
Q32 IRFIZ24
L10
R111 33
C63 M103
C64 M103
R112 33
D23 FMG22R
D22 FMG22S
C78 1500/35
C79 1500/35
C80 1500/35
C58 1500/35
C59 1500/35
C60 1500/35
C76 M333
R119 56K
R135 100

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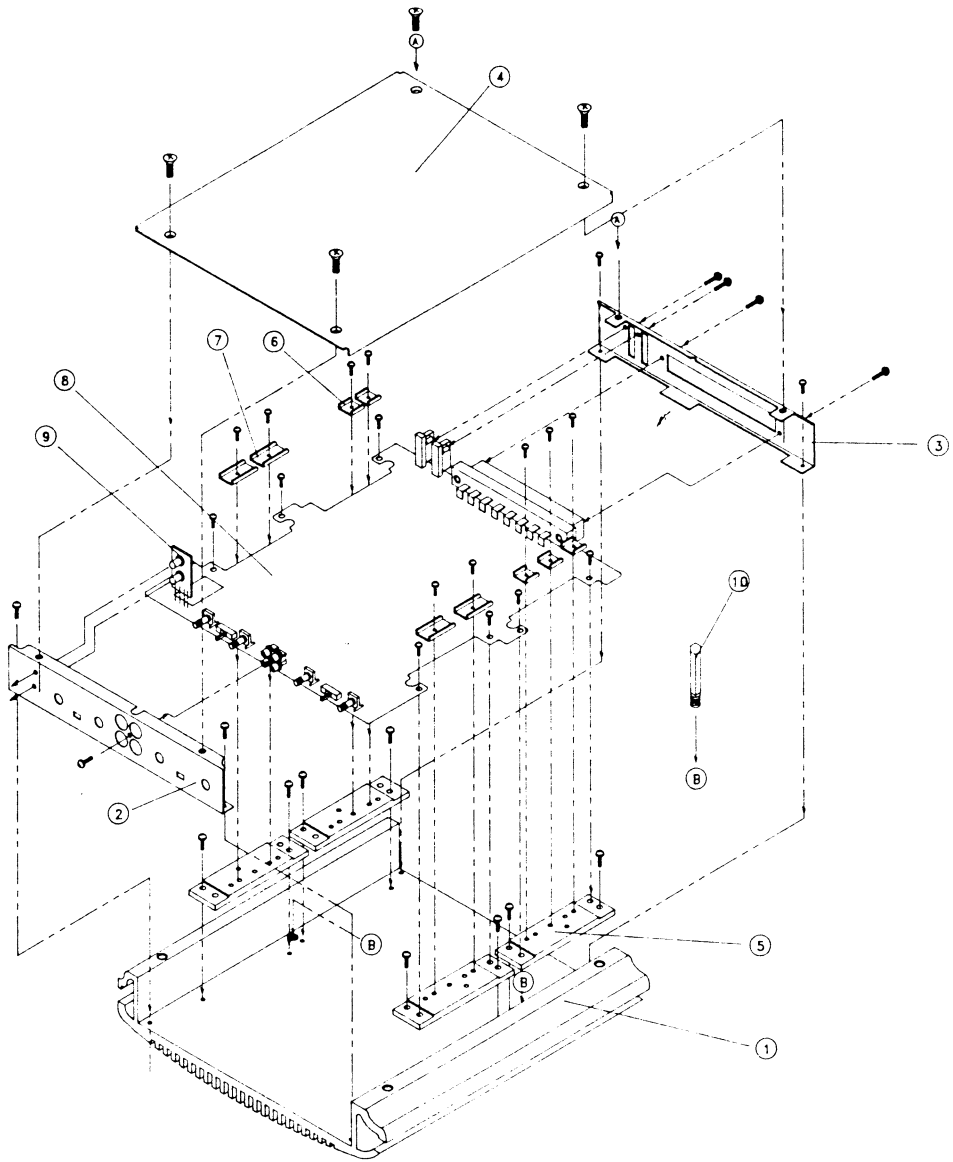
Date: January 9, 1996	Sheet of	

MODEL: DB-43AB-43



NO.	DESCRIPTION	MATERIAL	Q'TY	REMARKS
10	TOP COVER BRAKET		2	
9	LED PCB ASS'Y		1	
8	MAIN PCB ASS'Y		1	
7	IC BRAKET-B		4	
6	IC BRAKET-A		4	
5	IC HEAT SINK		4	
4	TOP COVER		1	
3	BACK COVER		1	
2	FRONT COVER		1	
1	BODY		1	

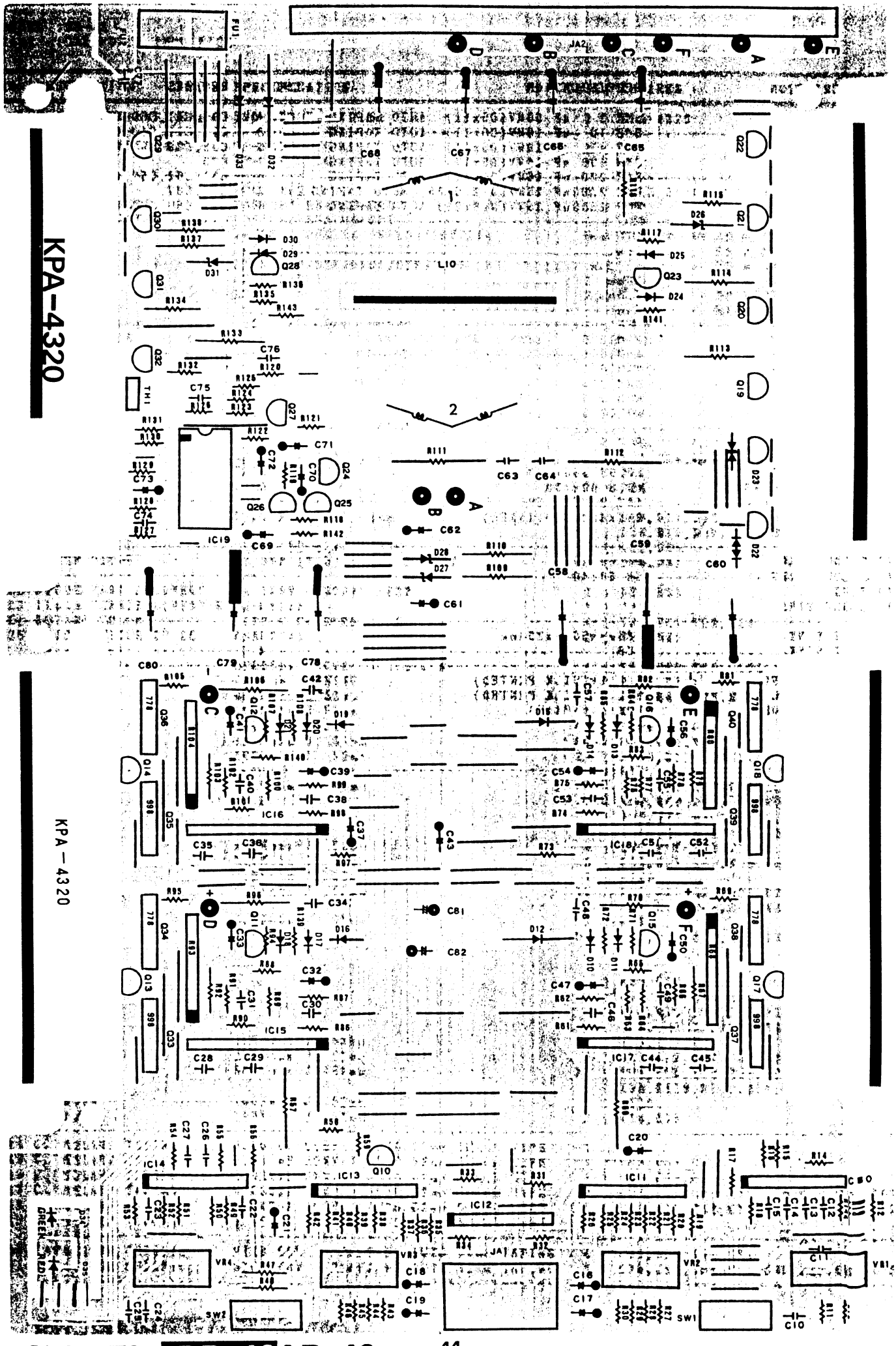
DRAWN	DESIGNED	CHECKED	APPROVED	NAME				
				MODEL	DISK NO.		CAD FILE	SHEET
					DRAW NO.			

PART LIST

MODEL :DB-43
NAME :CAR POWER AMPLIFIER

NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
1	Printed Circuit Board	190mmX307mmX 1.6t	1	KPA-4320
2	OSC COIL ASSEMBLY	ZP-44920-TC	1	
	CORE	ZP-44920-TC	1	
3	I.C	uPC1225H	4	IC15,IC16,IC17,IC18
4	SILICON DIODE	FMG22R/ ESAC25-02C	1	D22
5	SILICON DIODE	FMG22S/ ESAC25-02N	1	D23
6	MOS FET	IRFZ24/IRFIZ24/IRFZ34/IRFIZ34 IRFZ44/IRFIZ44/BUZ71A/BUZ71 STP30N06/STP40N06/STP50N06	6	Q19,Q20,Q21,Q22,Q29,Q30,Q31,Q32
7	RCA JACK	JW-4104D-1	1	JA1
8	AUTO FUSE	20A	2	
9	THERMISTER (NTC)	50K, (KT5D54F-C0080)	1	TH1
10	FUSE HOLDER		2	FU1,FU2
11	I.C	KIA-494P	1	IC19
12	I.C	KIA4558S/ NJM2068LD	5	IC10,IC11,IC12,IC13,IC14
13	SI-TR.	KTB778(R)	4	Q34,Q36,Q38,Q40
14	SI-TR.	KTD998(R)	4	Q33,Q35,Q37,Q39
15	SI-TR.	KTC3198(Y) AT / KTC1815(Y) AT	12	Q10,Q11,Q12,Q14,Q15 Q16,Q17,Q18,Q25,Q26,Q27
16	SI-TR.	KTA1266(Y) AT / KTA1015(Y)	3	Q23,Q24,Q28
17	LED	KLR113L	1	D35
18	LED	KLG113L	1	D34
19	DIODE	1SS133 AUTO 52mm	16	D10,D11,D12,D13,D14,D15,D16,D17 D18,D19,D20,D21,D24,D25,D29,D30
20	ZENER DIODE	MTZ 15C AUTO 52mm	2	D27,D28
21	ZENER DIODE	TZ 39B (T25) 52mm/ 1 WATT	2	D26,D31
22	DIODE FAST RECOVERY	6A 100V GP30J/GI8922	2	D32,D33
23	11pin TERMINAL(BENDING	JW-0611B	1	JA2
24	ROTARY VOLUME	V122 V Co 20RS B50K	4	VR1,VR2,VR3,VR4
25	SLIDE SWITCH 2P-2C	KSA-2241	2	SW1,SW2
26	R. Cement	MPR55D/ RGC22 0.1.ohm-K	4	R68,R80,R93,R104
27	R 1W	33 ohm FORMING	2	R111,R112
28	R 1/2W	4.7 ohm J 52mm	4	R70,R82,R96,R106
29	R 1/2W	10 ohm J 52mm	1	R133
30	R 1/2W	470 ohm/ 52mm	2	R109,R110
31	R. 1/6W	15 ohm J 52mm	4	R63,R76,R89,R100
32	R. 1/6W	100 ohm J 52mm	10	R113,R114,R115,R116 R117,R132,R134,R135,R137,R138
33	R. 1/6W	1K ohm J 52mm	28	R22,R24,R38,R40,R57,R60,R64 R67,R69,R73,R77,R79,R81,R90,R92,
	"	"		R95,R97,R101,R103,R105,R118, R120,R136,R141,R13,R17,R53,R56
34	R. 1/6W	1.2Kohm J 52mm	4	R66,R78,R91,R102
35	R. 1/6W	1.5Kohm J 52mm	6	R58,R59,R62,R75,R87,R99
35	R. 1/6W	3.3Kohm J 52mm	1	R129
36	R. 1/6W	4.7Kohm J 52mm	15	R20,R25,R27,R28,R29,R30,R36 R41,R43,R44,R45,R46,R122
37	R. 1/6W	5.6Kohm J 52mm	1	R125
38	R. 1/6W	10K ohm J 52mm	30	R12,R16,R19,R26,R31,R32
	"	"		R33,R34,R35,R42,R50,R51 R71,R72,R84,R85,R54,R55
	"	"		R94,R107,R108,R121,R123,R124,R128 R130,R131,R139,R142,R143
39	R. 1/6W	18K ohm J 52mm	3	R10,R11,R127
40	R. 1/6W	22K ohm J 52mm	6	R21,R23,R37,R39,R49,R52,R150,R151
41	R. 1/6W	56K ohm J 52mm	11	R61,R65,R74,R83,R86,R88 R98,R119,R140,R18,R114
42	R. 1/6W	100Kohm J 52mm	1	R126
43	R. 1/6W	180Kohm J 52mm	2	R14,R15
44	C. MYLAR/ TAPING	0.001uF 50WV J AUTO 52mm SMALL TYPE	1	C74
45	C. MYLAR/ TAPING	0.01 uF 50WV J AUTO 52mm SMALL TYPE	3	C63,C64,C75
46	C. MYLAR/ TAPING	0.022uF 50WV J AUTO 52mm SMALL TYPE	4	C22,C23,C26,C27
47	C. MYLAR/ TAPING	0.033uF 50WV J AUTO 52mm SMALL TYPE	9	C28,C34,C35,C42,C45,C48,C52,C57,C76
48	C. MYLAR/ TAPING	0.047uF 50WV J AUTO 52mm SMALL TYPE	8	C10,C11,C12,C13,C14,C15,C24,C25,
49	C. MYLAR/ TAPING	0.15 uF 50WV J AUTO 52mm SMALL TYPE	1	C77
50	CAPACITOR CERAMIC	HIKB 50V 33PF SL AUTO 52mm TAPING	4	C29,C36,C44,C51
51	CAPACITOR CERAMIC	HIKB 50V 220PF SL AUTO 52mm TAPING	8	C30,C31,C38,C40,C46,C49,C53,C55

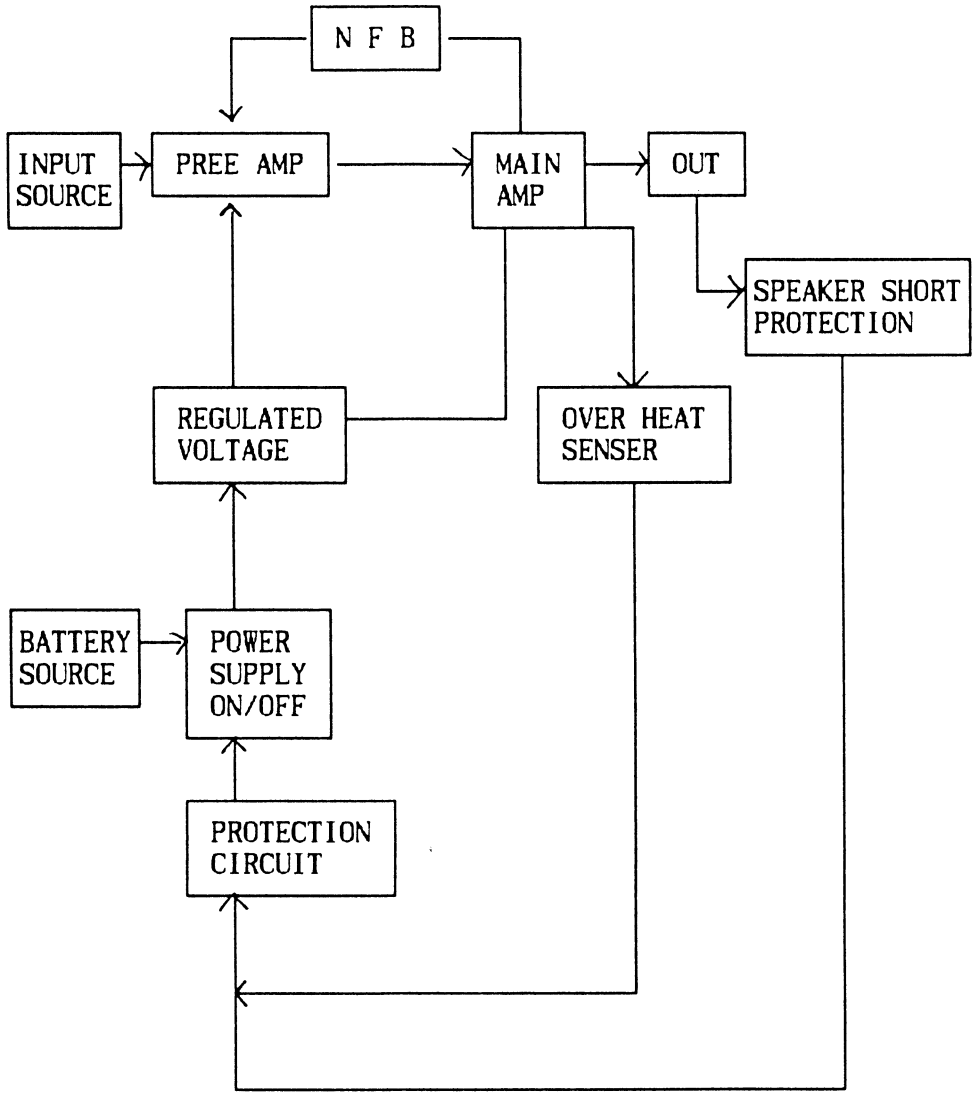
NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
52	Cap. Elec	SME 1 uF 50WV(D5x11) AUTO TAPING	4	C33,C41,C50,C56
53	Cap. Elec	SME 10 uF 16WV(D5x11) AUTO TAPING	8	C16,C17,C18,C19,C20,C21,C3
54	Cap. Elec	SME 47 uF 10WV(D5x11) AUTO TAPING	6	C32,C39,C47,C54,C70,C71
54	Cap. Elec	SME 100 uF 16WV(D5x11) AUTO TAPING	1	C73
55	Cap. Elec	SME 220 uF 16WV(D5x11) AUTO TAPING	6	C61,C62,C69,C72,C81,C82
56	Cap. Elec	KMG 2200uF 25WV(D12.5x25) AUTO TAPING	2	C65,C67
57	Cap. Elec	KME 1500uF 35WV(D18x25) AUTO TAPING	6	C58,C59,C60,C78,C79,C80
58	STRIP JUMPER WIRE	17.5mm	18	
59	STRIP JUMPER WIRE	15mm	12	
60	STRIP JUMPER WIRE	12.5mm	12	
61	STRIP JUMPER WIRE	10mm	38	
62	STRIP JUMPER WIRE	7.5mm	17	
63	STRIP JUMPER WIRE	5mm	31	
64	JUMPER WIRE	AWM1015 16AWG BLK 10- 190-10	1	A - A
65	JUMPER WIRE	AWM1015 16AWG BLUE 10-280-10	1	B - B
66	JUMPER WIRE	AWM1015 18AWG BRN 10-290-10	1	C - C
67	JUMPER WIRE	AWM1015 18AWG GREY 10-310-10	1	D - D
68	JUMPER WIRE	AWM1015 18AWG WHT 10-200-10	1	E - E
69	JUMPER WIRE	AWM1015 18AWG RED 10-250-10	1	F - F
70	SNOW BOX	E.P.S	2	
71	GIFT BOX		1	
72	POLY BAG(SET)	t0.08 350x440	1	
73	POLY BAG(ACCESARY)	t0.8 80x100	1	
74	MANUAL	ART PAPER 150	1	
75	CARTON BOX	346x452x365(INNER)	0.5	
76	MODEL LABEL		1	
77	SOLDER BAR	SN 60:40		
78	SOLDER WIRE	SN 60:40		
79	FLUX			
80	CABLE TIES		4	
81	HEAT SINK	280mmx56mmx294mm	1	
82	HEAT SINK	SUB	4	
83	FRONT PANNEL	EGI 1t(SILK PRNTED)	1	
84	REAR PANNEL	EGI 1t(SILK PRNTED)	1	
85	COVER BOTTOM	EGI 1t(SPRAY)	1	
86	TR BRAKT A	EGI 1.5t	5	
87	TR BRAKT B	EGI 1.5t	4	
88	PAD 24X90		1	
89	LED REFLECTOR RED	A.B.S 0.5g	1	
90	LED REFLECTOR GREEN	A.B.S 0.5g	1	

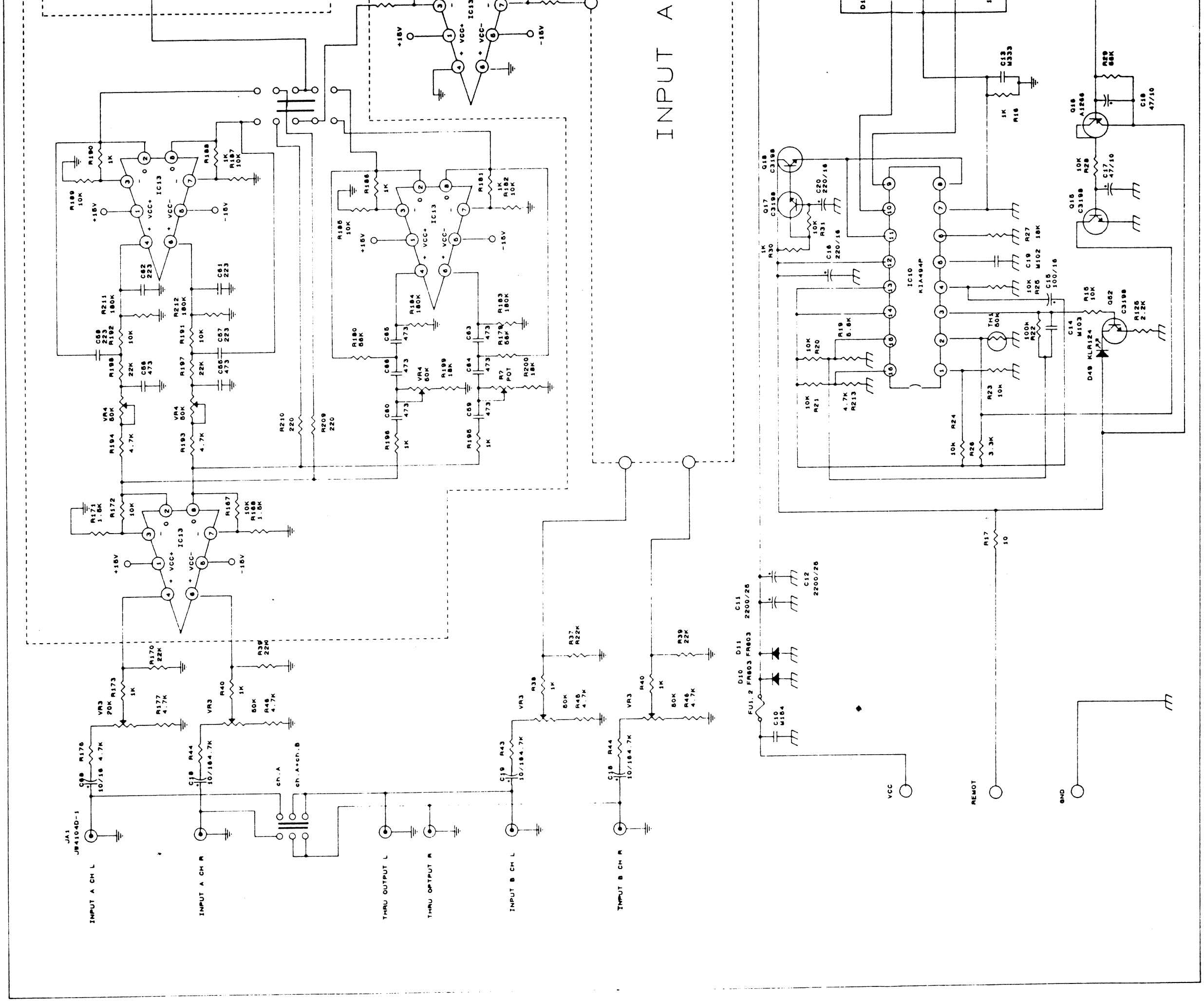

KPA-4320
KPA-4320
JA2
JA1
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
L10
TH1
SW1
SW2
VR1
VR2
VR3
VR4
GREEN LED
RED LED

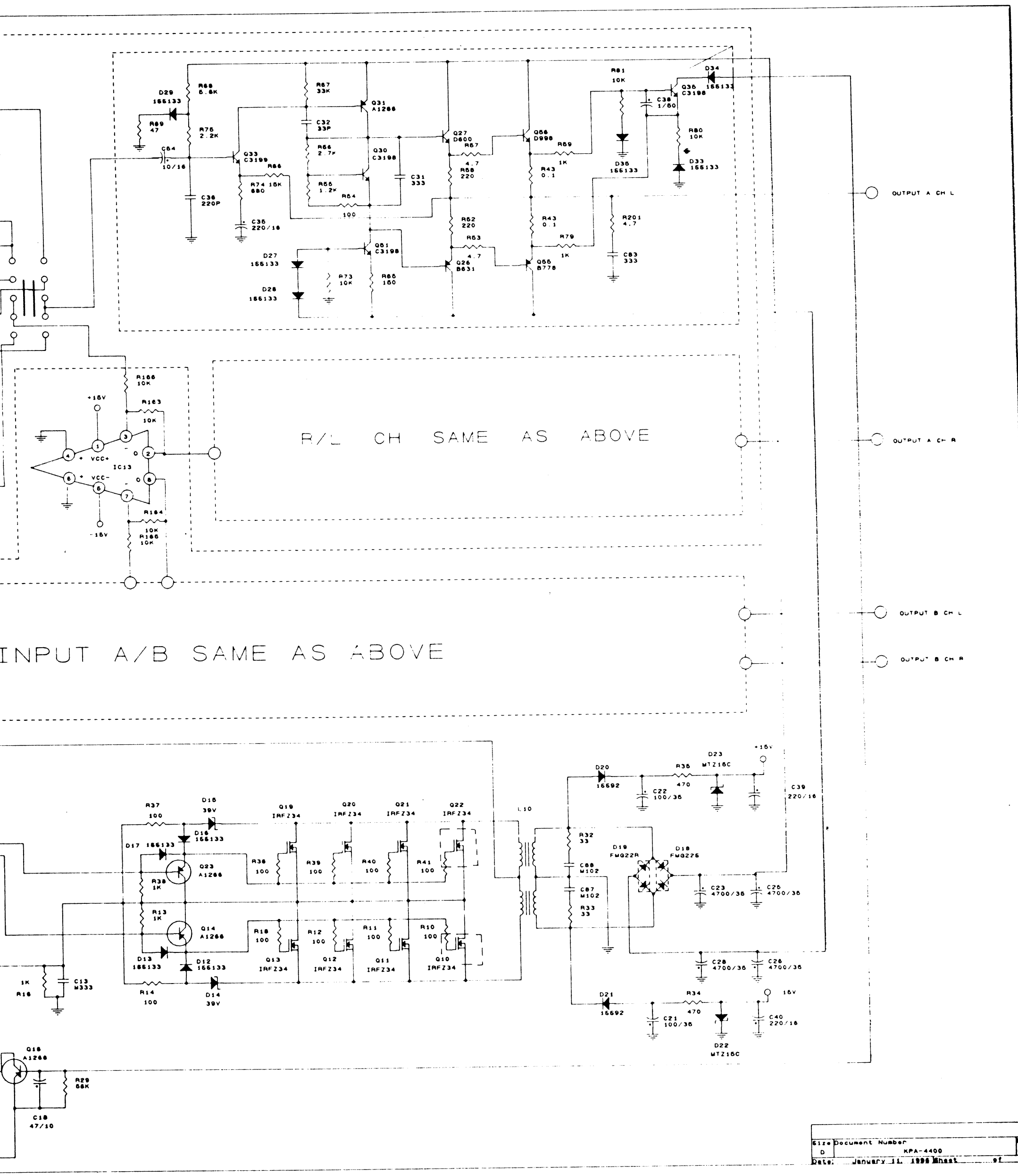
1. SPECIFICATIONS

- MOSFET POWER SUPPLY CIRCUITRY
- BRIDGEABLE OUTPUT POWER
- TRIMODE OUTPUT POWER
- GROUND-LOOP ISOLATION INPUT CIRCUITRY
- ADJUSTABLE INPUT LEVEL CONTROL
- SELECTABLE HIGH PASS FILTER FOR CH,A.WITH LINEAR LOW-FREQUENCY-CUT CROSSOVER FOR 40Hz~250Hz
  SELECTABLE LOW PASS FILTER FOR CH.A. WITH LINEAR HIGH FREQUENCY-CUT CROSSOVER FOR 40Hz~250Hz
- SELECTABLE LOW PASS FILTER FOR CH.B. WITH LINEAR HIGH FREQUENCY-CUT CROSSOVER FOR 40Hz~250Hz
  SELECTABLE HIGH PASS FILTER FOR CH,B.WITH LINEAR LOW-FREQUENCY-CUT CROSSOVER FOR 40Hz~250Hz
- PROTECTIONS.
  - SPEAKER LEAD SHORT PROTECTION
  - THERMAL PROTECTION
  - REVERSE POLARITY PROTECTION
- POWER ON LED (GREEN): "ON" WITH POWER
- PROTECTION LED (RED): "ON" IN TROUBL
- TRIMODE
- AVERAGE POWER OUTPUT/CH INTO 4 ohms - 70w x 4
- MAX POWER OUTPUT/CH INTO 4 ohms - 130w x 4
- FREQUENCY RESPONSE (±1db) - 10Hz - 30KHz
- SIGNAL TO NOISE RATIO - 90dB
- INPUT SENSITIVITY/INTO 10K ohms load Impedance
  HIGH ------- 850mV
  LOW ------- 85mV
- THD ---------- 0.2%
- CHANNEL BALANCE ---------- 1 dB
- STEREO SEPARATION ---------- 50dB
- RMS CURRENT ---------- 35A
- FUSES ---------- 40A
- DIMENSION W ---------- 280
  H ---------- 50
  D ---------- 330
- NET WEIGHT ---------- 4.5kg

2. BLOCK DIAGRAM




INPUT A
IC13
+15V
-15V
VCC+
VCC-
R189 10K
R190 1K
R188 1K
R187 10K
R185 10K
R186 1K
R181 1K
R182 10K
C82 223
C81 223
C58 223
C57 223
R211 180K
R212 180K
R192 10K
R191 10K
R198 22K
R197 22K
C56 473
C55 473
VR4 50K
R194 4.7K
R193 4.7K
R210 220
R209 220
R184 180K
R183 180K
R180 68K
R178 68K
C85 473
C83 473
C60 473
C84 473
R199 18K
R200 18K
VR4 50K
R2 POT
C80 473
C59 473
R196 1K
R195 1K
R171 1.8K
R172 10K
R167 10K
R168 1.8K
R170 22K
R39 22K
R173 1K
R40 1K
VR3 20K
VR3 50K
R177 4.7K
R45 4.7K
C88 10/16
C89 10/16
R176 4.7K
R44 10/164.7K
JA1 JR41040-1
INPUT A CH L
INPUT A CH R
ch.A
ch.A+ch.B
THRU OUTPUT L
THRU OPTPUT R
C19 10/164.7K
R43 4.7K
R38 1K
R37 R22K
INPUT B CH L
INPUT B CH R
C18 10/164.7K
R44 4.7K
R40 1K
R39 22K
VR3 50K
R45 4.7K
C11 2200/25
C12 2200/25
D10 FR803
D11 FR803
FU1.2
C10 0.1/63
VCC
REMOT
GND
R17 10
Q18 C3198
Q17 C3198
C20 220/16
R31 10K
R30 1K
C16 220/16
IC10 M1A4694P
R27 18K
C19 0.1/63
R26 10K
C15 100/16
R19 8.8K
R20 10K
R21 10K
R213 4.7K
R22 100K
TH1 50K
R23 10K
R24 10K
R25 3.3K
C14 0.1/63
D49 KLA124
Q62 C3198
R15 10K
R125 2.2K
C13 0.033
R16 1K
Q16 A1266
R29 68K
C18 47/10
R28 10K
C17 47/10
Q15 C3198



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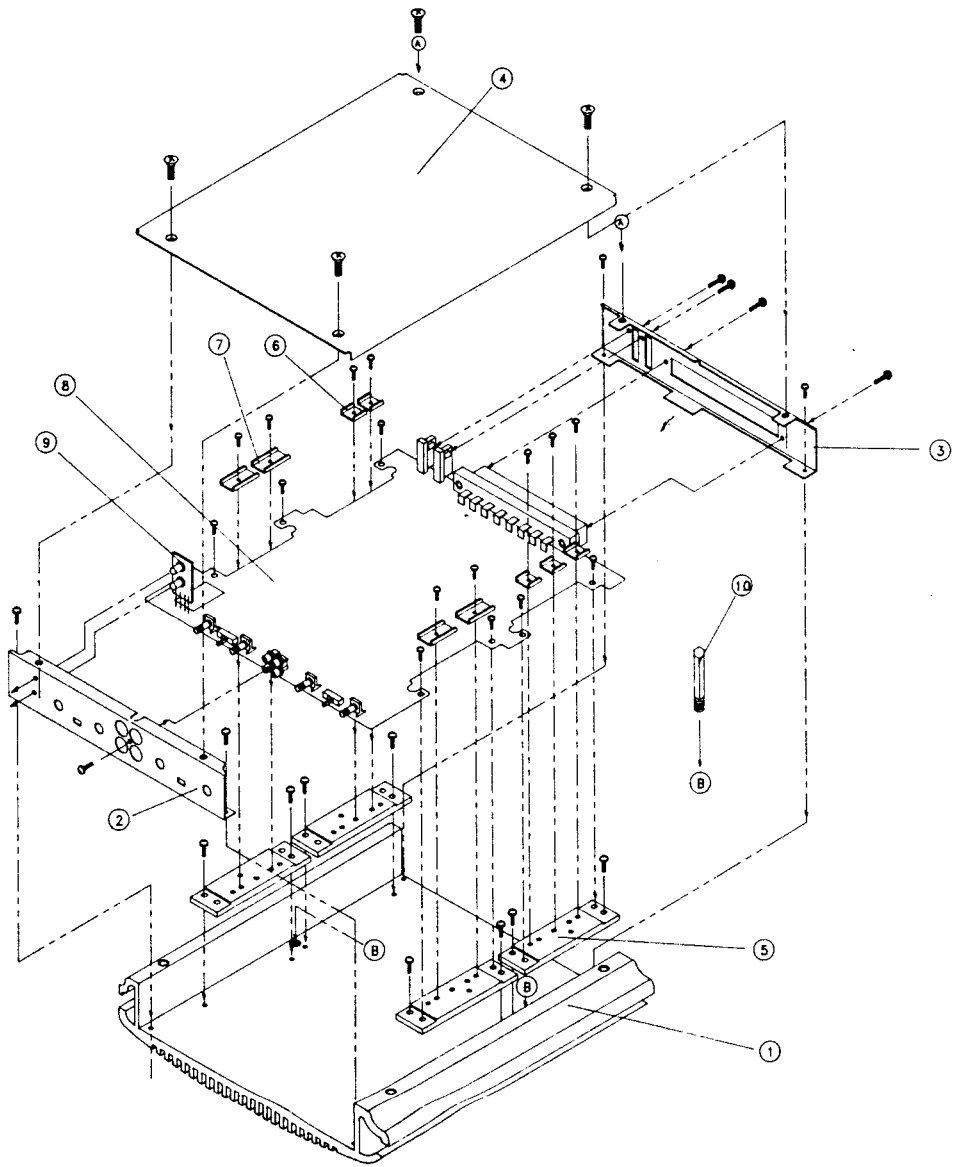
MODEL: DB-45AB-45



NO.	DESCRIPTION	MATERIAL	Q'TY	REMARKS
10	TOP COVER BRAKET		2	
9	LED PCB ASS'Y		1	
8	MAIN PCB ASS'Y		1	
7	IC BRAKET-B		4	
6	IC BRAKET-A		4	
5	IC HEAT SINK		4	
4	TOP COVER		1	
3	BACK COVER		1	
2	FRONT COVER		1	
1	BODY		1	

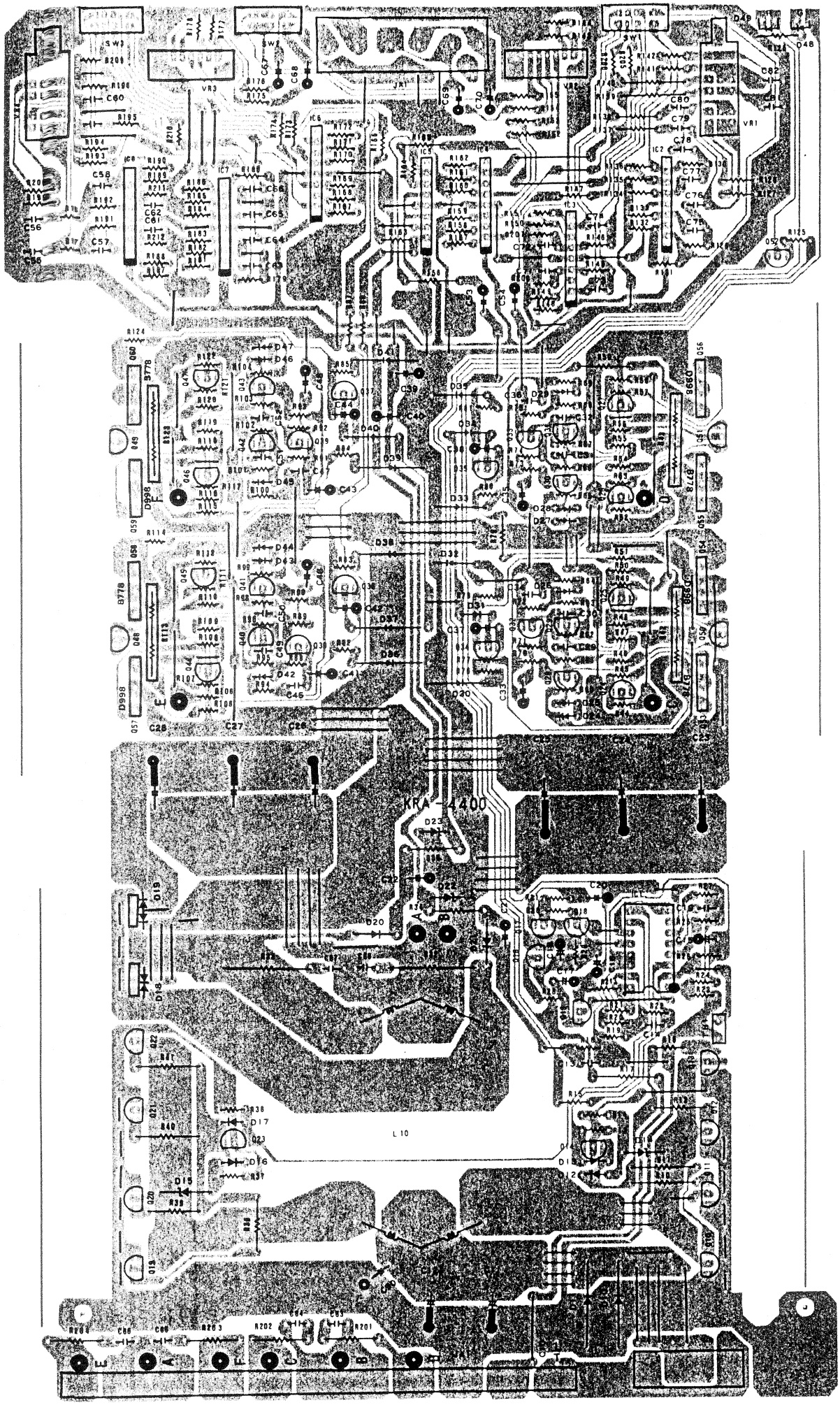
DRAWN	DESIGNED	CHECKED	APPROVED	NAME			
				MODEL	DISK NO.	CAD FILE	
					DRAW NO.		SHEET

MODEL : DB-45

NO	DESCRIPTION	SPECIFICATION	UNIT	REMARKS
1	Printed Circuit Board	190mmX348mmX1.6t (FR-1)	1	DB-45
2	OSC COIL ASSEMBLY	ZP-44920-TC	1	L10
	CORE	ZP-44920-TC	1	
3	SILICON DIODE	FMG22R/ ESAC25-02C	1	D19
4	SILICON DIODE	FMG22S/ ESAC25-02N	1	D18
5	MOS FET	IRPZ34/STP30N60	8	Q10,Q11,Q12,Q13,Q19,Q20,Q21,Q22
6	RCA JACK	JW-4105G-1	1	JA1
7	AUTO FUSE	20A	2	
8	THERMISTER (NTC)	50K, (KT5D54F-C0080)	1	TH1
9	FUSE HOLDER		2	FU1,FU2
10	I.C	KIA-494	1	IC1
11	I.C	KIA4558S/ NJM2068LD	7	IC2,IC3,IC4,IC5,IC6,IC7,IC8
12	SI-TR.	KTB778(R)	4	Q53,Q55,Q58,Q60
13	SI-TR.	KTD998(R)	4	Q54,Q56,Q57,Q59
14	SI-TR.	KTC3198(Y) AT / KTC1815(Y) AT	16	Q15,Q17,Q18,Q28,Q30,Q34,Q35,Q36 Q37,Q41,Q43,Q48,Q49,Q50,Q51,Q52
15	SI-TR.	KTA1266(Y) AT / KTA1015(Y)	7	Q14,Q16,Q23,Q29,Q31,Q40,Q42
16	SI-TR.	2SD600K	4	Q25,Q27,Q44,Q46
17	SI-TR.	2SA631K	4	Q24,Q26,Q45,Q47
18	SI-TR.	KTC3199	4	Q32,Q33,Q38,Q39
19	LED	KLR124	1	D49
20	LED	KLG124	1	D48
21	DIODE	1SS133 AUTO 52mm	28	D12,D13,D16,D17,D24,D25,D26,D27 D28,D29,D30,D31,D32,D33,D34 D35,D36,D37,D38,D39,D40 D41,D42,D43,D44,D45,D46,D47
22	DIODE	1SS92 AUTO 52mm	2	D20,D21
23	ZENER DIODE	MTZ 15C AUTO 52mm	2	D22,D23
24	ZENER DIODE	TZ 39B (T25) 52mm/ 1 WATT	2	D14,D15
25	DIODE FAST RECOVERY	6A 100V GP30J/GI8922	2	D10,D11
26	11pin TERMINAL(BENDING)	JW-0611B	1	JA2
27	ROTARY VOLUME	RK14K121	2	VR2,VR3
28	ROTARY VOLUME	V9M(7X6.5)G(4R)(PB2R)N10S-B50K X 4	2	VR1,VR4
29	SLIDE SWITCH 3P-2C	KSA-2341	2	SW1,SW3
30	SLIDE SWITCH 2P-2C	KSA-2241	1	SW2
31	R. Cement	MPR55D/ RGC22 0.1ohm-K	4	R42,R43,R113,R123
32	R 1W	33 ohm FORMING	2	R32,R33
33	R 1/2W	4.7 ohm J 52mm	4	R201,R202,R203,R204
34	R 1/2W	10 ohm J 52mm	1	R17
35	R 1/2W	470 ohm/ 52mm	2	R34,R35
36	R. 1/6W	4.7 ohm J 52mm	8	R45,R49,R53,R57,R107,R111,R117,R121
37	R. 1/6W	47 ohm J 52mm	4	R64,R69,R94,R100
38	R. 1/6W	100 ohm J 52mm	14	R10,R11,R12,R14,R18,R36,R37,R39,R40 R41,R46,R54,R110,R120
39	R. 1/6W	150 ohm J 52mm	4	R60,R65,R99,R104
40	R. 1/6W	220 ohm J 52mm	12	R44,R50,R52,R58,R106 R112,R116,R122,R205,R206,R209,R210
41	R. 1/6W	680 ohm J 52mm	4	R71,R74,R89,R92
42	R. 1/6W	1K ohm J 52mm	32	R13,R16,R30,R38,R51,R59 R77,R79,R86,R87,R105,R114,R115 R124,R131,R136,R137,R138,R147 R148,R151,R152,R153,R156,R173,R174 R181,R186,R188,R190,R195,R196
43	R. 1/6W	1.2Kohm J 52mm	4	R47,R55,R109,R119
44	R. 1/6W	1.5Kohm J 52mm	4	R158,R161,R168,R171
45	R. 1/6W	2.2Kohm J 52mm	5	R72,R75,R88,R91,R125
46	R. 1/6W	2.7Kohm J 52mm	4	R48,R56,R108,R118
47	R. 1/6W	3.3Kohm J 52mm	1	R26
48	R. 1/6W	4.7Kohm J 52mm	14	R126,R139,R140,R143,R144,R154,R155 R175,R176,R177,R178,R193,R194,R213
49	R. 1/6W	5.6Kohm J 52mm	5	R19,R63,R68,R95,R101
50	R. 1/6W	10K ohm J 52mm	40	R15,R20,R21,R23,R24,R25,R28,R31,R70 R73,R76,R78,R80,R81,R82,R83,R84,R85 R90,R93,R132,R135,R145 R146,R149,R150,R157,R162,R163 R164,R165,R166,R167,R172,R182 R185,R187,R189,R191,R192
51	R. 1/6W	15K ohm J 52mm	4	R61,R66,R98,R103
52	R. 1/6W	18K ohm J 52mm	5	R27,R127,R128,R199,R200
53	R. 1/6W	22K ohm J 52mm	8	R141,R142,R159,R160,R169,R170,R197,R
54	R. 1/6W	33K ohm J 52mm	4	R62,R67,R96,R102
55	R. 1/6W	56K ohm J 52mm	5	R29,R129,R130,R179,R180
56	R. 1/6W	100Kohm J 52mm	1	R22
57	R. 1/6W	180Kohm J 52mm	8	R133,R134,R183,R184,R207,R208,R211.R212

MODEL : DB-45

NO	DESCRIPTION	SPECIFICATION	UNI	REMARKS
58	C. MYLAR/ TAPING	0.001uF 50WV J AUTO 52mm SMALL TYPE	3	C19,C87,C88
59	C. MYLAR/ TAPING	0.01 uF 50WV J AUTO 52mm SMALL TYPE	1	C14
60	C. MYLAR/ TAPING	3333	4	C57,C58,C73,C74
61	C. MYLAR/ TAPING	0.033uF 50WV J AUTO 52mm SMALL TYPE	13	C13,C29,C31,C50,C52,C61 C62,C71,C72,C83,C84,C85,C86
62	C. MYLAR/ TAPING	0.047uF 50WV J AUTO 52mm SMALL TYPE	16	C55,C56,C59,C60,C75,C76,C77,C78,C79 C80,C63,C64,C65,C66,C81,C82
63	C. MYLAR/ TAPING	0.15 uF 50WV J AUTO 52mm SMALL TYPE	1	C10
64	CAPACITOR CERAMIC	HIKB 50V 33PF SL AUTO 52mm TAPING	4	C30,C32,C49,C51
65	CAPACITOR CERAMIC	HIKB 50V 220PF SL AUTO 52mm TAPING	4	C34,C36,C45,C47
66	Cap. Elec	SME 1 uF 50WV(D5x11) AUTO TAPING	4	C37,C38,C42,C44
67	Cap. Elec	SME 10 uF 16WV(D5x11) AUTO TAPING	8	C41,C43,C53,C54,C67,C68,C69,C70
68	Cap. Elec	SME 47 uF 10WV(D5x11) AUTO TAPING	2	C17,C18
69	Cap. Elec	SME 100 uF 16WV(D5x11) AUTO TAPING	2	C21,C22
70	Cap. Elec	SME 220 uF 16WV(D5x11) AUTO TAPING	8	C16,C20,C33,C35,C39,C40,C46,C48
71	Cap. Elec	SXE 2200uF 25WV or KMG 2200uF/25WV	3	C11,C12 or C11,C12,C90
72	Cap. Elec	SRF 4700uF 35WV(D x)	4	C23,C25,C26,C28
73	STRIP JUMPER WIRE	17.5mm	18	
74	STRIP JUMPER WIRE	15mm	12	
75	STRIP JUMPER WIRE	12.5mm	12	
76	STRIP JUMPER WIRE	10mm	38	
77	STRIP JUMPER WIRE	7.5mm	17	
78	STRIP JUMPER WIRE	5mm	31	
79	JUMPER WIRE	AWM1015 16AWG BLK 10- 190-10	1	A - A
80	JUMPER WIRE	AWM1015 16AWG BLUE 10-280-10	1	B - B
81	JUMPER WIRE	AWM1015 18AWG BRN 10-290-10	1	C - C
82	JUMPER WIRE	AWM1015 18AWG GREY 10-310-10	1	D - D
83	JUMPER WIRE	AWM1015 18AWG WHT 10-200-10	1	E - E
84	JUMPER WIRE	AWM1015 18AWG RED 10-250-10	1	F - F
85	SNOW BOX	E.P.S	2	
86	GIFT BOX		1	
87	POLY BAG(SET)	t0.08 350x440	1	
88	POLY BAG(ACCESARY)	t0.8 80x100	1	
89	MANUAL	ART PAPER 150	1	
90	CARTON BOX	346x452x365(INNER)	1	
91	MODEL LABEL		1	
92	SOLDER BAR	SN 60:40		
93	SOLDER WIRE	SN 60:40		
94	FLUX			
95	CABLE TIES		2	
96	HEAT SINK	MAIN(AL)	1	
97	HEAT SINK	SUB	4	
98	FRONT PANNEL	EGI 1t(SILK PRNTED)	1	
99	REAR PANNEL	EGI 1t(SILK PRNTED)	1	
100	COVER BOTTOM	EGI 1t(SPRAY)	1	
101	TR BRAKT A	EGI 1.5t	5	
102	TR BRAKT B	EGI 1.5t	4	
103	PAD 24X90		2	
104	TAPPING SCREW	f3x4, TT2.BIND.YEL	1	(SUB HEAT SINK ALL + TR). (SUB ALL + MAIN HEAT SINK)
105	TAPPING SCREW	T3x6, TT2.BIND.YEL	12	(S.HEAT SINK+IC) (S.HEAT SINK+POSISTOR)(PCB+S.HEAT SINK)
106	TAPPING SCREW	T3x10 TT2.BIND.YEL	8	(PANEL+M.HEAT SINK)
107	TAPPING SCREW	T3x12,TT2.BIND.YEL	10	(TERMINAL.RCA)
108	MACHINE SCREW	M3x6, FCT.BLK	4	(BOTTOM+PANEL)
109	MACHINE SCREW	M2x5, BLK	2	(FUSE HOLDER)
110	TAPPING SCREW	T3x8,TT2.BIND.BLK	4	(6*BOLT+PCB)
111	MACHING SCREW	M6x33	2	
112	TAPPING SCREW	T4x25 T1 BIND BLK	4	ACCESSORY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